TORO

GOLF IRRIGATION PRODUCTS

INTERNATIONAL MARKETS




Learn more at **Toro.com**

TABLE OF CONTENTS

Overview

Control Systems Field Controllers

Sprinklers

Valves

Resources

NEW PRODUCT OVERVIEW

sp

Golf Sprinklers

fc

Field Controllers

cs

Control Systems

tg

Turf Guard®

is

Irrigation Services

INFINITY™ SERIES GOLF SPRINKLERS. Engineered for Today's Challenges. Designed for Tomorrow's Technologies.

The new INFINITY™ Series improves your course quality with less workload and most important, it keeps players playing. Calculate the money you'll save by cutting sprinkler maintenance from hours to minutes.

Smart Access®

Future proof

Protective enclosure

SMART ACCESS compartment offers room for a decoder module, wire splices and all the room to grow in the future.

GOLF SPRINKLERS OVERVIEW

Learn more at **Toro.com**

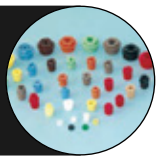
TRAJECTORY ADJUSTMENT
In 24-position Tru-Jectory or Dual Trajectory to help fight the wind, avoid obstacles or to reduce the radius.

RATCHETING RISER
Simply pull up the riser and ratchet it to the precise position you want to water.

FLEX 800™ SERIES GOLF SPRINKLERS.

Golf sprinklers with all the efficiency and proven performance features and benefits of the 800S and DT Series

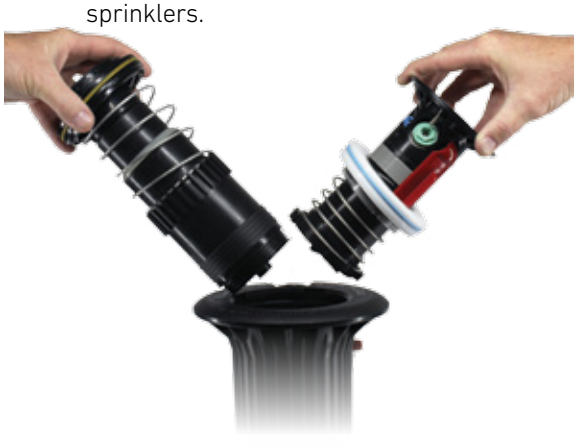
LARGE NOZZLE SELECTION
From 6,0m to 30,5m (20' to 100') we've got you covered! Only Toro provides the flexibility to optimize your system for maximum uniformity.



PART AND FULL CIRCLE MODELS
Align part circle quickly and easily or adjust watering locations to suit seasonal needs.

NEW

Toro FLEX800 R Series – Easily and economically upgrade your existing Rain Bird® Eagle™ 900/1100 series sprinklers.



FIELD CONTROLS OVERVIEW

Learn more at **Toro.com**

Toro is the leading golf irrigation company in the world and provides an array of field control options.

Satellite-based systems are specified by many of the world's best designers and are in use at the vast majority of golf courses today. Satellite systems use controllers placed on each hole to operate a specified number of stations. These controllers are coordinated to work together with a central computer, but can also be programmed independently for grow-in and stand-alone operation.

- Station Based Flow Management: reduces nighttime water window and optimizes pump capacity.
- Hardwire, 2-way radio and paging communication options allows for easy installation and maintenance.
- Future upgrades can be accomplished with advanced satellite firmware, keeping you current with technology.
- Satellite upgrade kits enable older Toro satellite units to be upgraded very cost effectively vs. a complete system change-out.

FIELD CONTROLS OVERVIEW

While others have followed in our footsteps, Toro is the industry leader in advanced 2-wire systems, with the largest customer base and the largest systems in operation.

Learn more at **Toro.com**

Advanced 2-Wire Control

The Lynx® Central Control System offers unequaled integration with Toro's Field Control Systems, enabling you to have the complete information needed to support your irrigation decisions.

2-wire systems provide an alternative to traditional satellites. Intelligent modules installed near or on the sprinklers replace these boxes. These modules are all connected to the central computer by a simple two-conductor cable. The elimination of the satellite boxes and the thousands of feet of wire simplifies the installation, improves the aesthetics and reduces cost.

1, 2 and 4 Station Modules

CONTROL SYSTEM OVERVIEW

Learn more at
torolynx.com

Integration with pump stations such as Flowtronex® PACE, gives you complete information to support your irrigation decisions.

Simplified decision making with Dynamic Drilldown.

With NSN® Integrated Turf Guard® soil sensor Lynx is with you when and helps you save you want. water.

Flexible and editable map simplifies irrigation control.

The Toro® Lynx® Control System

Maintaining optimal playability on your golf course, while best managing resources, requires the right combination of information and control.

The Toro Lynx Control System is your solution. It empowers you to take quick, accurate action to effectively control and manage your golf course by providing past, present and future course information from multiple sources into a single, intuitive interface.

Easy Set Up

Easy to Use

Easy to Control

Support Available 24/7 with NSN®

Available Anywhere, Anytime.

TURF GUARD®

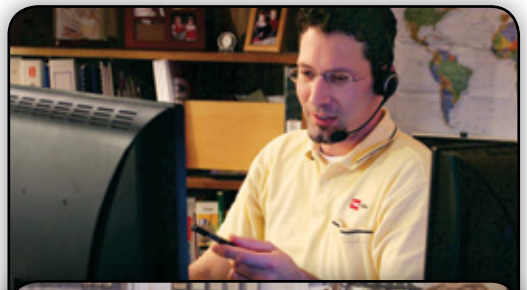
Learn more at
Turfguard.com

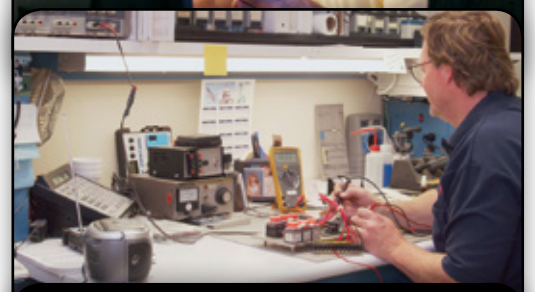
Toro Turf Guard Wireless Soil Monitoring System

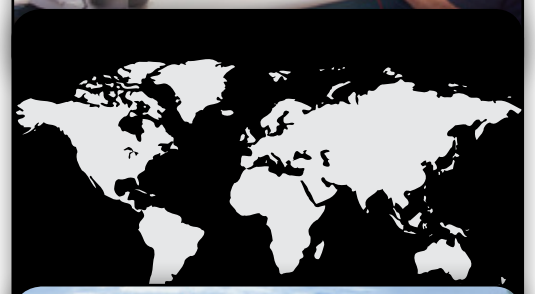
helps you improve your water efficiency, turf and soil.

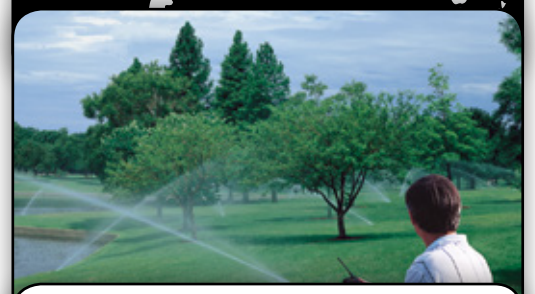
- Available fully integrated into the new Toro® Lynx® control system.
- Monitors soil moisture, salinity, and temperature levels.
- New easy to use SiteVision™ software provides superintendents with a wealth of data about soil conditions.
- Interactive report screens make it easier to access, analyze, print and download data.
- The in-ground sensors are easy to install, and have batteries that can easily be replaced on-site.

Learn more at **Toro.com**









Toro Technical Support

Our technical support team is highly skilled at what they do. From helping superintendents, program controllers, to troubleshooting complex system issues with consultants, the support team provides years of irrigation experience that you can count on. For exceptional technical support, call 1-877-345-TORO.

Toro Controller Repair

Did you know that with Toro's Board Exchange Program you can get the replacement controller boards you need immediately? Through your distributor, Controller Repair provides controller boards ready for immediate board exchange to assure that controller downtime is minimal and your golf course and reputation stays protected. For immediate assistance call: 1-877-345-TORO. (Visit Controller Repair website at www.toro.com/controller-repair)

Toro Distributor Support

Our distributors have been our partners for an average of 40 years (10 to 88 years) and we consider them an extension of us.

Toro Field Service

With some of the most knowledgeable and helpful field service staff in the industry, and our extensive training and support programs; Toro field service personnel are always there to assist—before, during, and well after a sale.

Toro Genuine Parts

From the smallest sprinkler part to complete control systems, Toro Service Parts support can deliver most replacement parts to our distributors within hours. In fact, Toro offers its customers the highest parts order completion rate in the industry: 98%!

Toro National Support Network (NSN)

A team of A+ certified technicians and licensed irrigators dedicated to the daily operations and maintenance of computerized central control systems for customers worldwide. (see page 19 for more information)

Learn more at
Toro.com

CONTROLLERS

lx

Lynx®

tg

Turf Guard®

gdc

Network GDC

vp

Nextwork VP®

vpe

Nextwork VPE®

e-o

E-OSMAC®

rdr

OSMAC® RDR

Lynx® Central Control System
Page 13

Turf Guard®
Page 16

Field Controller Comparison

Feature/Capability	Network GDC	Network VP®	Network VPE®	E-OSMAC®	OSMAC® RDR
Page	21	24	27	30	30
Maximum Station Per Controller	1600	64	64	64	48
Maximum Simultaneously Operating Stations Per Controller	200	32	16	16	16
Stand-alone Programs	10**	64	16	24*	24*
Wireline Field Communication	Yes	Yes	Yes	No	No
Wireless Field Communication	No	Yes	Yes	Yes	Yes
Upload Field Changes	No	Yes	Yes	No	No
Field Controller Alerts	No	Yes	Yes	No	No
Downloaded Programs	No	Yes	Yes	No	No
Station Based Flow Management	Yes	Yes	Yes	Yes	Yes
Station Current Sensing	No	Yes	No	No	No
Station Runtimes In Seconds	No	Yes	Yes	No	No
Lauguage Capacity	No	No	Yes	No	No

** Requires Smart OSMAC*
*** GDC 200 Stand-alone Gateway*

LYNX® CENTRAL CONTROL SYSTEM

Learn more at
torolynx.com

Features & Benefits | Specifications

The Toro® Lynx® Control System

Developed specifically to help you address the unique challenges and changing priorities you face very day. With the Lynx System, you can now have all of your essential irrigation information readily available in one place, conveniently combined into a single, intuitive interface.

Features & Benefits

1 **Lynx 3.0 Adds More Flexibility And More Control**
Station Percent Adjust for duration allows you to set temporary adjustments that automatically returns to normal after a set number of days. The new Sequential Instant Program allows you to pick the order stations water automatically. GDC system diagnostics can now be selected by Hole or Area to make pin pointing a problem even easier, and you can now chose to have Lynx automatically upload station changes into the Watering Plan.

2 **Simplified Decision Making With Dynamic Drilldown**
Guides you to where you need to go. Follow the water drop in the Watering Plan to find stations, holes or entire areas that are disabled, on hold or otherwise not programmed to irrigate. Quickly find any stations in Course Report that did not operate as intended.

3 **Flexible and Editable Map**
Easily add, drag, drop and assign sprinklers, satellites, sensors and switches to their exact locations. You can effortlessly make edits as your field hardware changes. Fully supports CAD-generated maps.

4 **Power Guard Helps Prevent Wasted Energy**
Integration with a Flowtronex® pump station with PACE™ enables the exclusive Lynx Power Guard feature to track and control electricity usage of the system.

Lynx Mobile
Enables remote access and control from any mobile device connected to the Internet. Screens are specifically designed and optimized for smaller devices.

LYNX® CENTRAL CONTROL SYSTEM

SPECIFICATIONS – Lynx® Levels Comparison

SYSTEM CAPACITY	Lynx CE	Lynx PE	Lynx SE
Satellites	500	500	500
Satellites Stations	32,000	1344	512
GDC Stations	6400	1000	500
Weather Stations	10	10	10
Pump Stations	10	3	2
Courses	3	2	1
Holes	84	56	28
Hydraulic Branches	1024	300	100
Sensor Inputs per Board	7	7	N/A
Sensor Input Board per Satellite	1	1	N/A
Sensor Input Board per System	40	40	N/A
HARDWARE SUPPORTED			
OSMAC®	Yes	Yes	Yes
Network GDC	Yes	Yes	Yes
Network VP® /Network VPE	Yes	No	No
PROGRAMMING			
Network VP Sensors	Yes	No	No
E-OSMAC Sensors	Yes	Yes	No
VP Current Sensing	Yes	No	No
VP Station Adjust Upload	Yes	No	No
Site Code Categories	7	3	No
Precip. Mgmt. Groups (PMG)	Yes	Yes	No
Max. Stations/Hole Control	Yes	Yes	No
Instant Program Creation	Yes	Yes	Yes
Program Priority	Yes	Yes	No
Pump Profiling	Yes	Yes	No
Station Group Multi-Manual	Yes	No	No
Master Group Multi-Manual	Yes	No	No
Pump Integration	Yes	Yes	Optional
Weather Station ET	Yes	Yes	Optional
ET Auto Calc. RT Method	Yes	Yes	Optional

NSN® Connect Remote access so that you can control irrigation anytime, anywhere.

ADDITIONAL FEATURES

Runtimes:

- Runtimes are executed to the second rather than rounding to the whole minute, resulting in more precise irrigation and water savings (Network VP® /Network VPE & OSMAC® only)
- Control your irrigation by setting runtime minutes or application inches and let the system calculate the other. See exactly how much water you will apply and how long you will irrigate each area.
- Runtime synchronization with Network VP /Network VPE satellites prevents irrigation outages if the central goes offline.
- Integrated runtime display shows past and planned irrigation activity so you can easily determine what action to take.

Quick Start:

- With Quick Start, you create station, hardware and area associations, and control the definition of greens, tees, fairways and sprinklers based on the their locations.
- A basic hydraulic tree is auto-generated for you during Quick Start.

Views and Reports:

- Course Report provides both real time and daily summaries of both scheduled and manual watering events.
- Area and Hole orientation allows you to control your irrigation system the same way you think about the course.
- Instant Program has simple check-box selection and Dynamic Drilldown to you can instantly create and personalize new irrigation programs
- Projected Flow View shows you areas that will be watered and how much will be applied.

Communication:

- Current-sensing capabilities notify you of wire cuts and sprinklers unintentionally turned off (Network VP /Network VPE only).
- Constant communication with Network VP /Network VPE satellites lets you take action if a power outage threatens irrigation.
- Toro GDC communication and solenoid diagnostics help identify shorts, low voltage and other issues.
- Weather station integration and Hand-held Remote Interface support are included as standard features

Operating System:

- Windows 7

Specifying Information—Lynx

LX-0X-1-XX				
Type	*Computer Hardware*	*Service*	*Level*	*Field Hardware*
LX	**0X**	**1**	**X**	**X**
LX—Lynx	0—Budget Computer 1—Standard Computer	1—1-year NSN (Standard)	2—SE 3—PE 4—CE	1—OSMAC / E-Series OSMAC 3—Network VPE 7—Network VP 8—Network GDC
Example: When ordering a Lynx PE Central with a standard computer and one year of NSN using Network VPE field hardware, you would order: LX-01-1-33				

** Available only in PE and CE levels*
*** Network VP and VPE models only*

TURF GUARD® WIRELESS SOIL MONITORING SYSTEM

Learn more at **Toro.com**

Get the essential soil information you need, when you need it.

Stay up to date on your current soil conditions no matter where you are. Get the information you need to make important decisions in real time. Turf Guard sensors instantly track soil moisture, salinity, and temperature, saving you time. Repeaters mount easily inside all Toro® Network VP®, Network VPe®, Network LTC® Plus and E-OSMAC® satellite pedestals.

Features & Benefits | Specifications

Integrated Turf Guard® Soil Sensor Information helps you determine when to irrigate and how much. Which helps you save water.

Features & Benefits

1. **Reduce Water Usage and Improve Playability**
Monitor moisture levels and adjust irrigation without risking turf quality. Promote root growth by avoiding over watering. Detect dry areas before they impact the turf's health.

2. **100% Wireless Network**
No wires between the repeaters and the sensors, or the sensor and the probes means that sensors can be installed anywhere on the course without disrupting play. Install sensors without having to trench or pull wires.

3. **Take the Guesswork out of Managing Salinity**
Track salt build-up and schedule flushing as needed. Get positive confirmation that your flushing reduced soil salts. Know when and how much water to flush with.

Web-based or Stand-alone Interface
Graphical course overview displays sensor data at-a-glance. Plus with Toro Lynx® Control System integration you can check course moisture, salinity and temperature readings right from your irrigation control software.

TURF GUARD® WIRELESS SOIL MONITORING SYSTEM

How it works:

- Three to five sensors buried in each green at critical root zone levels
- Additional sensors buried in fairways, tee boxes and planters
- Above-ground radiorepeaters installed on or in existing irrigation pedestals
- Wireless MESH networking links all sensors to central control system.
- Moisture, Temperature and Salinity readings displayed in your office

SPECIFICATIONS

Operational

- Two distinct depths in the soil profile – critical root zone level and a second 127mm (5") lower. Independent measurements from each depth.
- MESH routing technology offers complete coverage even in remote canyon courses.
- Repeater mounts in most Toro irrigation satellite pedestals. An external repeater is available for other models including non-Toro pedestals.
- Supports up to 500 sensors per course
- Expected sensor battery life of 3 years, field replaceable.
- Sensor reading sent every 5 minutes.
- Automatic network configuration and failure recovery.
- Plots trends and compares historical and current readings.
- Lynx® Control System integration

Electrical

Input Power:
- Repeater: <0,02A @ 6 VDC
- Base Station: <0,1A @ 120 VAC, 50/60 Hz

Sensor dimensions:
- Body: 5,1 x 7,6 x 12,7cm (2" x 3" x 5")
- Spikes: 6,4 x 0,5cm (2.5" x 0.1875")
- Installation Hole Diameter: 10,8cm (4.25")

Sensor temperature:
- Operating: 0°C to 60°C (32°F to 140°F)
- Storage: -30°C to 82°C (-22°F to 180°F)

Sensing:
- 0,1°F Temperature resolution
- 0,1 % Volumetric soil moisture content resolution
- 0,1 dS/m Soil conductivity resolution (Salinity)

Communication:
- Repeater Range: 610m (2,000') line-of-sight
- Buried Sensor Range: 152m (500') line-of-sight
- Additional licensing not required

Specifying Information—Turf Guard

TG-XX-XXX-XX		
Model	*Description*	*Communication*
TG	XX-XXX	XX
TG-Turf Guard	S2-R-Sensor, Replaceable Battery B-Base Station R-EXT-Repeater, External R-INT-Repeater, Internal PS-Power Supply	AU-915.5 to 927.5 MHz Band EX-900 MHz ISM Band EU-869 MHz ISM Band

Note: Not available in all locations, please check with your Toro representative for availability.

Hand-held Radio Interface

Hand-held Radio works in conjunction with Lynx® and puts manual irrigation capabilities in your hand. Whether you're doing spot watering, broad area irrigation or troubleshooting, It allows you to conduct watering activities while you're on the move. Take your radio with you to manually start/stop programs, run individual stations or groups of stations, initiate syringe watering and more.

Features & Benefits

- Optional for the following Lynx® central control systems:
  Network VP® | Network VPe® | OSMAC | GDC
- Simple command set
- Extensive start and syringe capabilities
- Comprehensive multi-manual functionality
- System and program pause and resume
- System On and Off command activation
- UL listed
- Built-in programmable radio
- Access central and satellite features from the field
- Simple command set
- Clear audio verification of system commands

Specifying Information—Hand-held Radio Interface

NB-HHRI-0X		
Communication	*Hardware*	*Optional*
NB	HHRI	0X
NB—Narrow Band	HHRI—Hand-held Radio Interface	01—With Radio 02—Less Radio
Example: When specifying a Network Hand-held radio with narrow-band frequency and a 110 V ac transformer, you would specify: NB-HHRI-01		

Note: FCC license required.

Specifying Information—Network Hand-held Software

Model Number	*Description*
997-05	Network Hand-held Software

Note: FCC license required.

Network Radio-Link and FIU with Radio

Network Radio-Link offers you the flexibility to design your irrigation system unconfined by the limitations of distance or terrain. Oversized acreage and natural barriers are not a problem for Network Radio-Link. Communicating where wires can't run, it's the bridge between non-contiguous wire line systems and much more.

Features & Benefits

- Wireless communication to Network satellites
- Network Radio-Link kits for upgrades
- True 2-way communication
- Multi-port field interface allows one radio to be shared among many satellites
- Easy satellite installation
- Compatible with Network LTC Plus, Network VP and Network VPe

Specifying Information—Field Interface Unit (FIU)

Model No.	*Description*
FIU-2011	Field Interface Unit with 1 Wire Line and 1 Radio Line, Radio Not Included
FIU-2011R	Field Interface Unit with 1 Wire Line and 1 Radio Line, Radio Included
FIU-2021	Field Interface Unit with 2 Wire Lines and 1 Radio Line, Radio Not Included
FIU-2021R	Field Interface Unit with 2 Wire Lines and 1 Radio Line, Radio Included

Note: FCC license required.

NSN® (NATIONAL SUPPORT NETWORK)

- WE'RE ALWAYS HERE FOR YOU!

Learn more at **Toro.com**

National Support Network, Toro NSN®

Before, during and after the purchase of your Toro central control system, we pledge to support all of your needs with our National Support Network, Toro NSN®. From small system upgrades to large-scale golf applications, our knowledgeable staff, including bilingual representatives, is available to assist you over the phone 24/7, every day of the year. Our technicians can link directly to your system's computer to perform remote diagnostic checks and offer expert advice. If necessary, we can send you a replacement computer within 24 hours - during the work week (delivery times may vary, depending on ship-to location). Support subscriptions to Toro NSN are included with the purchase of a Toro central control system and can be renewed for extended periods after this initial subscription. NSN Connect provides remote access and our latest offering, NSN Connect Plus allows remote monitoring of your system.

Features

- Remote access so that you can control Irrigation anytime, anywhere
- Easy access from your Apple or Windows mobile device
- Ability to easily transfer files
- Ability to print remote documents from a remote location
- Remote access activity logs and other

NSN® Connect Plus for Lynx Features

Adds remote hardware and software monitoring to NSN Connect

- Proactive support and computer hardware replacement from NSN

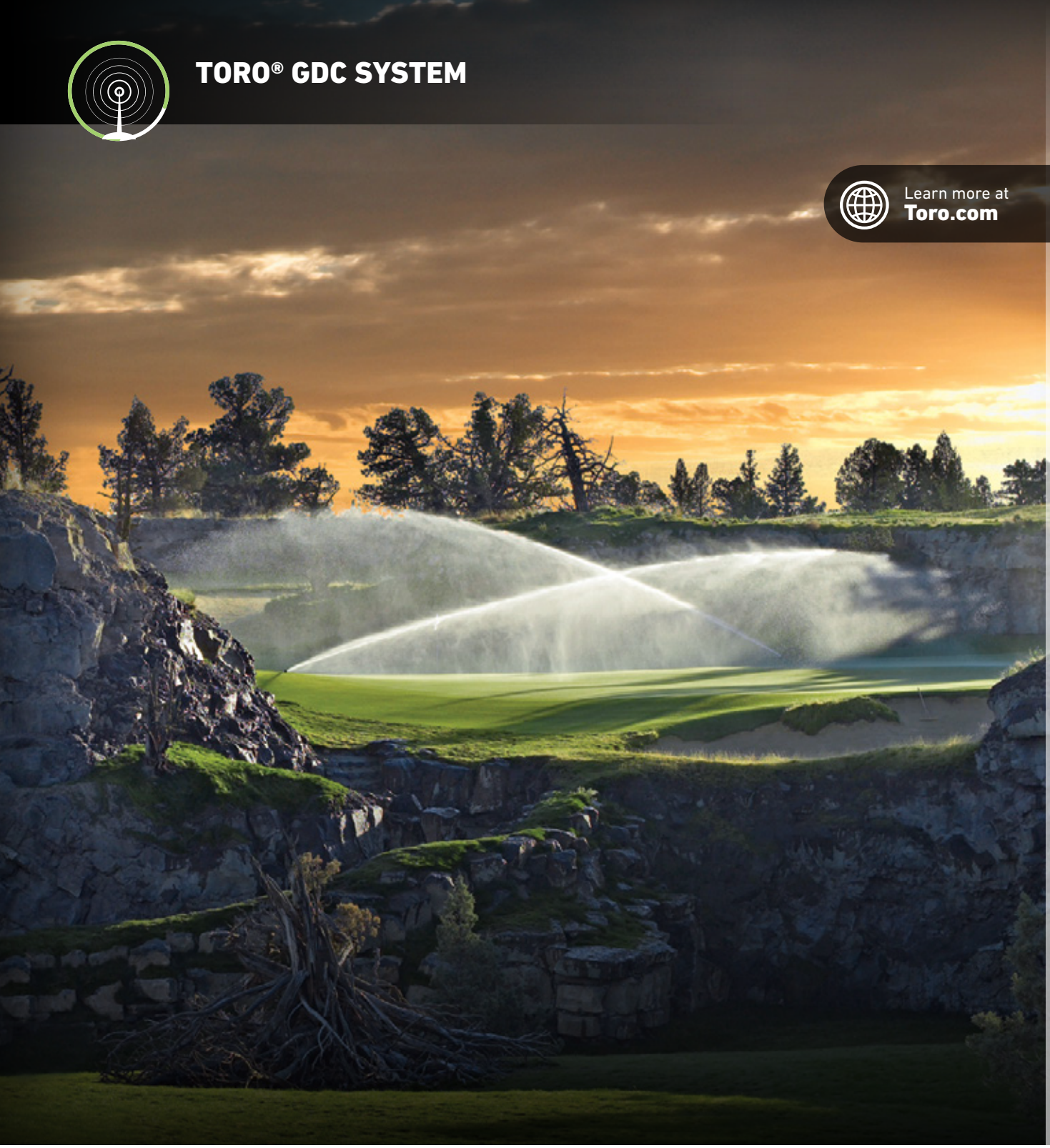
NSN® Connect Plus for Lynx

Specifications

- Platform – Toro® Lynx control system
- Operating System – Windows 7 (64-bit)
- User Configuration:
  - Ability to enable / disable specific monitors
  - Ability to have alerts sent to different recipients for different monitors
- Monitors
- Toro Lynx Control System Software
- Computer Hardware
- High speed Internet access required at the irrigation computer

TORO® GDC SYSTEM

Learn more at
Toro.com



Features & Benefits | Specifications

The Toro® GDC System

The Toro® GDC System uses innovative technology to provide an irrigation solution to customers who want a safe, reliable and energy efficient system. Using a two-wire path to communicate to buried control units, the system eliminates the costs associated with traditional valve wire bundles and provides a solution that is vandal resistant, easy to install and easy to expand.

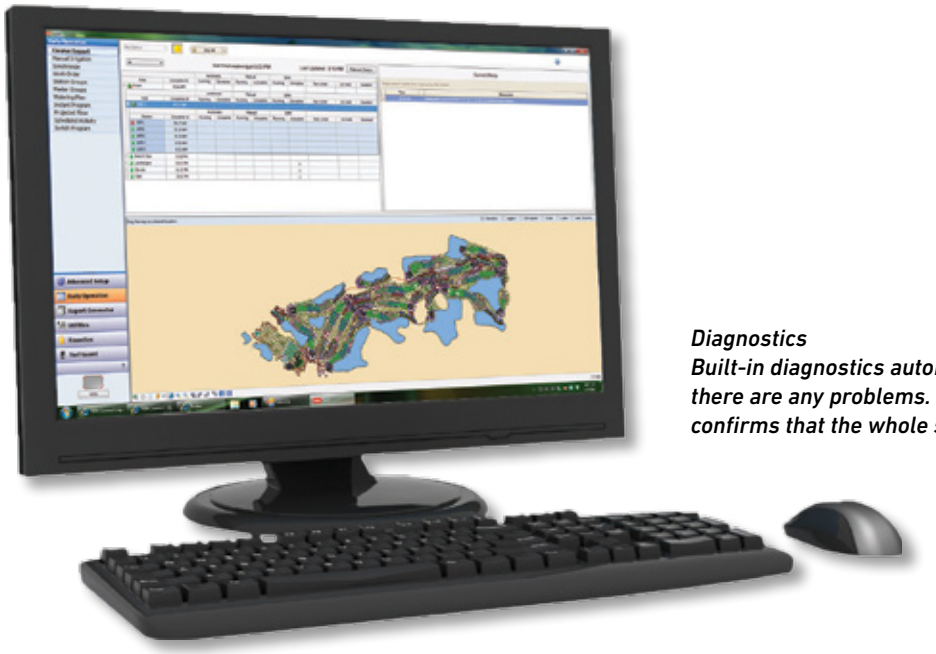
Features & Benefits

1. **Lower Costs With Flexible Configurations**
GDC Systems can be configured with the modules located in valve boxes outside of the playing area for easy access and lower cost, or with the modules integrated with the sprinkler to reduce wire and splices.

2. **Less System Downtime With Integrated Surge Protection (ISP)**
ISP 2-wire modules are rated at 20 KV surge protection—the highest in the industry. In some of the most active lightning areas of the world, the GDC provides rock-solid performance.

3. **Easily Expandable Up To 9000 Stations**
Whether you have 100, 800 or 9000 stations, the GDC system will meet your needs and can be expanded by simply adding modules.

4. **Station-based Flow Management**
Reduces nighttime water window and optimizes pump efficiency. Central irrigation programs are available from the hand held radio for manual watering.

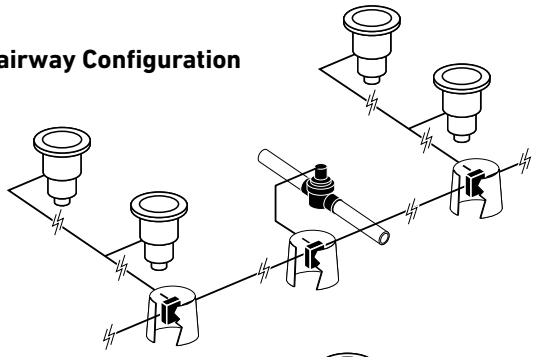


Diagnostics
Built-in diagnostics automatically let you know if there are any problems. The wire path check quickly confirms that the whole system is operational.

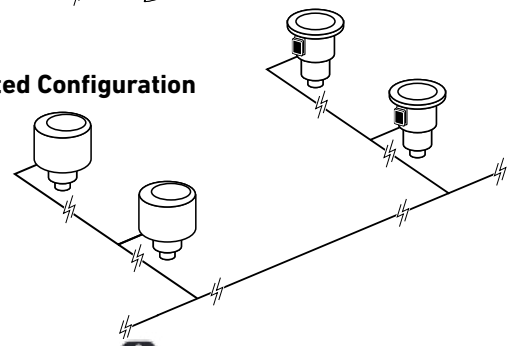
Integrated Sprinkler
Toro valve-in-head sprinkler models have an integrated 2-wire module option.

TORO® GDC SYSTEM

Off Fairway Configuration



Integrated Configuration



DEC-ISP-4 *DEC-ISP-2* *DEC-ISP-1*

Standard

Lynx® *DEC-PCS-1600*

NEW

Remote

Lynx® *FIU-2011DR* *DEC-RS-1000M* *DEC-RS-1000DR*

SPECIFICATIONS

Operational

- Lynx Central:
  - Mapping capabilities
  - Remote hand-held operation
  - Weather station integration
  - Pump station integration
- Enhanced diagnostics:
  - Communication
  - Electrical shorts/opens
  - Solenoid check
- No holding power required to operate stations
- Decoder identification is a unique 5-character address
- Standalone option (GDC200)

Installation

- Maximum number of wire paths:
  - 4 per gateway
- Maximum number of gateways:
  - 4 per system (standard); 9 per system (remote)
- Maximum number of decoders per wire path:
  - 250
- Maximum stations per gateway:
  - 1000 integrated/remote
  - 1600 off fairway
- Maximum stations per system:
  - 4000 integrated
  - 6400 off fairway/9000 remote
- Simultaneous stations per output board:
  - 100
- Maximum distance from central to module (using 14 gauge wire): 4 Kilometers (2.6 miles)
- Maximum distance from module to sprinkler (using 14 gauge wire): 121,9m (400 ft.)
- Solenoids per output: 2 DCLS-P
- Stations per module: 1, 2 or 4

Electrical

- Input power:
  - 88-264 V ac, 50/60 Hz
- Output Power:
  - Output voltage: 40 V ac max
  - Output power: 75 VA max
  - Class 2, SELV
- ISP 2-wire modules are rated at 20 KV surge protection
- 2-Wire modules wiring: 14 awg

Temperature

- Operating temperature: 0°C to 60°C (32°F to 140°F)
- Storage temperature: -30°C to 100°C (-22°F to 212°F)

Specifying Information—Decoder

DEC-ISP-X	
Type	***Configuration***
DEC-ISP	**XX**
DEC-ISP—Module*	1—1-station 2—2-station 4—4-station
Example: A 2-station GDC Module would be specified as: DEC-ISP-2	

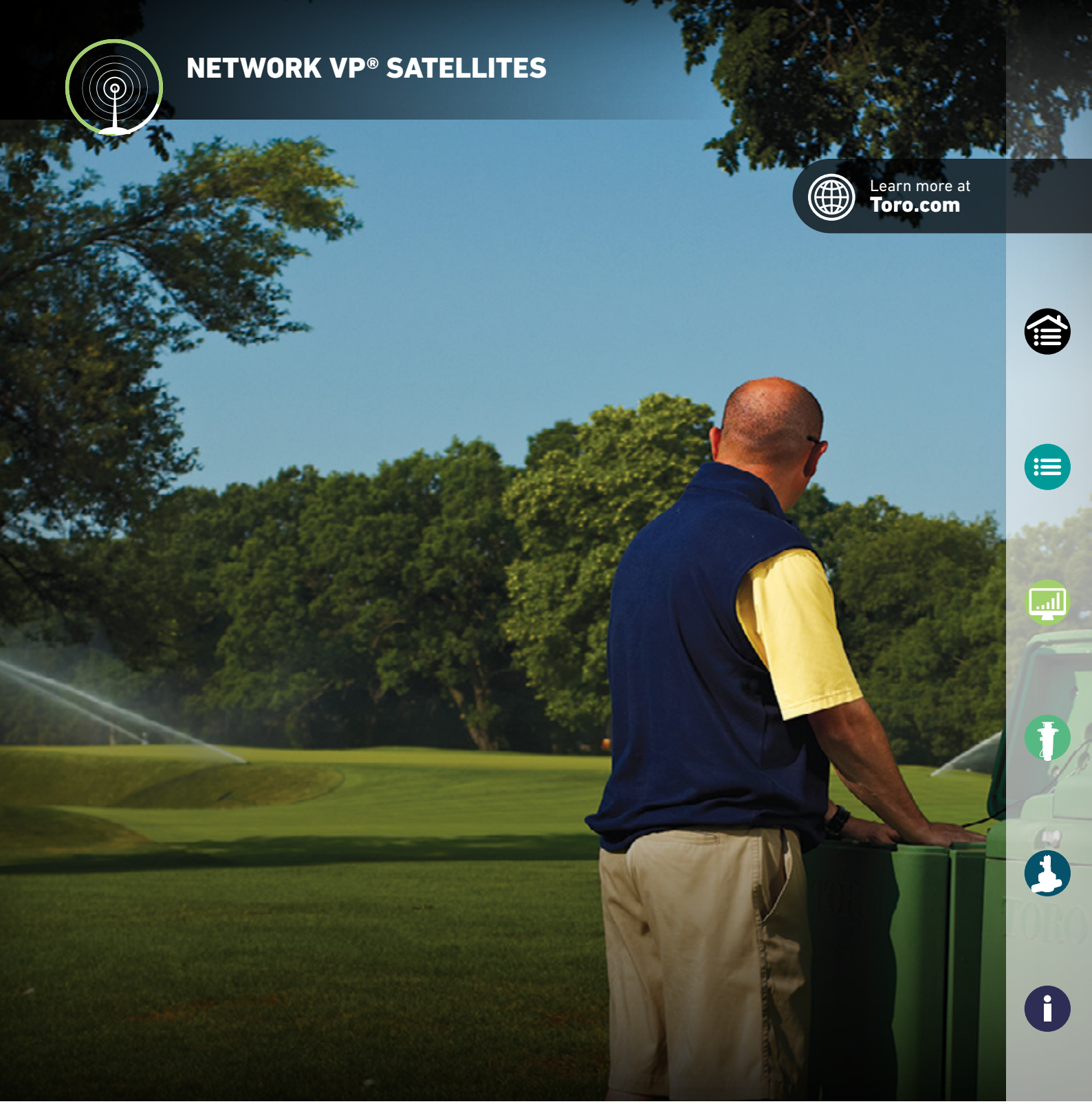
**Refer to sprinkler pages for specifying information on Sprinkler 2-wire Modules*

Specifying Information—Gateway

DEC-SA-200		
Type	***Communication***	***Sta. Count***
DEC	**SA**	**200**
DEC—Decoder	SA—Stand-alone PCS—Central RS—Remote*	200—200 Stations 1600—1600 Stations, standard 1000-M—1000 Stations, Remote, Wired 1000-DR—1000 Stations, Remote, Radio

**1000-M & 1000-DR only*

NETWORK VP® SATELLITES



Learn more at **Toro.com**

Features & Benefits | Specifications

The Network VP® Satellite from Toro®

The Network VP® satellite from Toro® combines modular flexibility, ease of use and increased control in a single controller. With individual station runtimes programmed to the second and station-based flow management, the Network VP provides the most water efficient capabilities for irrigating.

Features & Benefits

1 **Station Based Flow Management**
Reduces nighttime water window and optimizes pump capacity. Central irrigation programs (greens, tees, etc.) are available from the satellite faceplate for manual watering and field adjustments.

2 **Reduced Download Time**
Variable Length (VL) communication reduces download time by up to 80%. Communicate all program information to field controllers in minutes.

3 **Current Sensing Provides Protection**
Monitors each station output for proper amperage draw with user defined thresholds. Under and over current alarm notification protects against electrical shorts, wire cuts, etc.

4 **Runtime In Seconds For More Precise Watering**
Station runtimes are executed to the second. This prevents individual stations from over or under watering by up to 25% compared to systems that operate only in whole minutes.

Intuitive User Interface With backlit display for better low-light viewing. Station range entry makes establishing irrigation routines easier. DVD type controls for Start, Pause/Resume and Stop.

DEC-ISP-1

DEC-ISP-2

DEC-ISP-4

NETWORK VP® SATELLITES

Upgrade Kit – Network LTC® Plus to Network VP Upgrade kits include a faceplate, power distribution board, and interface cable. Full installation can be completed in minutes per controller.

SPECIFICATIONS

Operational

- Sensor input support for flow, pressure, rain, temperature and status. Each satellite supports up to 7 sensor inputs. Each system can support up to 40 satellites with sensor inputs.
- Operates as a stand-alone controller, or under the management of a central computer
  - Supports wireline or radio communications
  - Supports hybrid communication (wireline & radio)
- 64 irrigation programs
- Basic, Advanced and Grow-in programs
- Percent adjust from 1% to 900%
- Each output can be defined as an irrigation station or general application switch
- Non-volatile memory retains program information and satellite settings during power-off conditions. Battery back-up retains the date and time.
- 16-64 stations in 8-station increments – individual station control and the ability to run up to 32 stations simultaneously

Electrical

Input Power:

- 108 V ac to 132 V ac, 60 Hz
- 0,20 amps (no load) 115 V ac
- 1,20 amps (max load) 115 V ac
- 216 V ac to 264 V ac, 50 Hz
- 0,10 amps (no load) 230 V ac
- 0,60 amps (max load) 230 V ac

Output Power:

- 24 V ac
- 3,0 amps (max total load)
- UL Listed

Additional Specifications

- Operating temperature: -10°C to 60°C (15°F to 140°F)
- Storage temperature: -30°C to 65°C (-22°F to 149°F)
- Humidity: 0% to 95% RH (non-condensing)

Dimensions

- Plastic Cabinet: 43,2cm W x 101,6cm H x 40,6cm D (17" W x 40" H x 16" D)
- Metal Cabinet: 33,0cm W x 91,4cm H x 33,0cm D (13" W x 36" H x 13" D)

Specifying Information—Network VP Satellites

201-XXX6XX					
Description	***Configuration***	***Cabinet***	***Output***	***Comm.***	***Options***
201	**XX**	**X**	**6**	**X**	**X**
201—Network VP Satellite	**16—16 Stations 24—24 Stations 32—32 Stations 40—40 Stations 48—48 Stations 56—56 Stations 64—64 Stations**	**P—Plastic, Green S—Stainless Steel (Painted) T—Desert Sand B—Tree Bark**	**6—24 VAC Electric**	**A—Stand-alone M—2-Way Wire Modem R—UHF Radio**	**3—Large-capacity Terminal Block & Switches 4—Large-capacity Terminal Block w/Add'l Surge & Switches**
Example: When ordering a 24-station, Stand-alone VP Satellite in a plastic cabinet with large-capacity terminal block, additional surge and switches, you would specify: 201-24P6A4					

Radio option not available in all locations, please check with your Toro representative for availability.

Specifying Information—Network LTC Plus Upgrade Kit

118-0038
Kit Contains
Network VP Faceplate, Network LTC Plus To Network VP Power Distribution Board, Cable And Hardware

NETWORK VP®E SATELLITES

Learn more at **Toro.com**

Features & Benefits | Specifications

The Network VP®E Satellite

The Network VPE Satellite combines modular flexibility, ease of use and increased control in a single controller. Available in configurations from 16 to 64 stations and in eight-station increments to meet your needs. Optional station switches and surge protection provide simple operation and added security.

Features & Benefits

1. **Multi-Language Display**
Display supports 7 languages: Chinese, English, French, Italian, Japanese, Korean and Spanish.

2. **Intuitive User Interface**
Easy to use interface with backlit display for better low-light viewing. Large 128 x 64 LCS screen display menu.

3. **Station Based Flow Management**
Reduces nighttime water window and optimizes pump efficiency. Central irrigation programs (greens, tees, etc.) are available from the satellite faceplate for manual watering and field adjustments.

4. **Two Way Communication With Improved Download Time**
Upload changes and programs made in the field automatically. Saves programs in case of communications loss. Variable length (VL) communication reduces download time by up to 80% from previous versions.

5. **Modularity Provides Flexibility**
16-64 stations in 8-station increments – 16 programs – individual station control and you can run up to 16 stations simultaneously.

NETWORK VP®E SATELLITES

SPECIFICATIONS

Operational

- Optional output switches and surge protection
- Sturdy plastic pedestal
- Supports wireline or radio communications
- Supports hybrid communication (wireline and radio) for increased flexibility and cost effectiveness.
- 16 irrigation programs
- Pause, Resume and Stop functions
- Supports run times from 1 second to 23:59:59
- Percent adjust from 1% to 900% (Station, Program, Satellite)
- Each output can be defined as an irrigation station or general application switch
- Non-volatile memory retains program information and satellite settings during power-off conditions. Battery back-up retains the satellite date and time

Electrical

Input Power:

- 108 V ac to 132 V ac, 60 Hz
  - 0,20 amps (no load) 115 V ac
  - 1,20 amps (max load) 115 V ac
- 216 V ac to 264 V ac, 50 Hz
  - 0,10 amps (no load) 230 V ac
  - 0,60 amps (max load) 230 V ac

Output Power:

- 24 V ac
  - 3,0 amps (max total load)
- UL Listed

Additional Specifications

- Operating temperature: -10°C to 60°C (15°F to 140°F)
- Storage temperature: -30°C to 65°C (-22°F to 149°F)
- Humidity: 0% to 95% RH (non-condensing)

Dimensions

- Plastic Cabinet: 43,2cm W x 101,6cm H x 40,6cm D (17" W x 40" H x 16" D)

Warranty

- Two years

Specifying Information—Network VPE Satellites

10X-XXX6XX					
Description	*Configuration*	*Cabinet*	*Output*	*Comm.*	*Options*
10X	XX	X	6	X	X
100—Network VPE Satellite (115/230 VAC Input) 109—Network VPE Satellite (100/200 VAC Input)	16—16 Stations 24—24 Stations 32—32 Stations 40—40 Stations 48—48 Stations 56—56 Stations 64—64 Stations	P—Plastic, Green T—Desert Sand B—Tree Bark	6—24 VAC	A—Stand-alone M—2-Way Wire Modem R—UHF Radio	3—Large-capacity Terminal Block & Switches 4—Large-capacity Terminal Block w/Add'l Surge & Switches
Example: When ordering a 24-station, 2-way wire VPE Satellite in a plastic cabinet with large-capacity terminal block, additional surge and switches, you would specify: 100-24P6M4					

Radio option not available in all locations, please check with your Toro representative for availability.

Specifying Information—Network LTC Plus Upgrade Kit

102-9740
Kit Contains
Network VPE Faceplate, Network LTC Plus To Network VPE Power Distribution Board, Cable And Hardware

E-OSMAC® AND OSMAC RDR SATELLITES

Learn more at **Toro.com**

Features & Benefits | Specifications

The E-OSMAC Satellite

The E-OSMAC satellite is easy to install, troubleshoot and maintain. Economical because you buy only what you need and can expand as your site conditions change. They utilize paging technology to create one of the most convenient, dependable, and flexible satellites on the market. Employing wireless communication, these satellites are great for retrofit projects. ***Available only in selected territories.***

Features & Benefits

1. **Low Cost Wireless Communication**
Ideal choice for upgrading existing systems. No communication wires are needed. Mounts to many existing pedestal bolt patterns.

2. **Easily Expandable**
E-OSMAC offers up to 64 stations in eight-station increments. The OSMAC RDR is expandable from 16 to 48 stations.

3. **Lower Operating Costs**
The enhanced surge protection on E-OSMAC and electric OSMAC RDR provide lower operating costs. Ideal for high lightning areas.

4. **Sensor Inputs – New**
Added peace of mind and increased efficiency with optional sensor inputs. Together with Lynx, E-OSMAC can monitor flow, pressure, rain, temperature and status inputs.

Low Voltage Retrofit Kit Used for the OSMAC RDR this kit converts stand-alone controllers to wireless central control.

E-OSMAC® AND OSMAC RDR SATELLITES

E-OSMAC Synthesized Decoder Modules
Modules can be reprogrammed in the field – new frequency models can store up to 4 pre-programmed frequencies to transition from construction to permanent frequencies (narrowband).

SPECIFICATIONS

Operational

E-OSMAC:

- Sensor input support for flow, pressure, rain, temperature and status. Each satellite supports up to 7 sensor inputs. Each system can support up to 40 satellites with sensor inputs
- Colored LED indicators to confirm 24-, 9-, and 5-volt power to various boards within the cabinet
- LED's for each station output
- Internal antenna allows for smaller profile cabinet
- Patented Hot Post for each eight-station module

RDR OSMAC:

- Hydraulic or electric models available
- Multi-function hand held radio allows control and voice transmissions from the same unit
- Programmable syringe time from 30 seconds to 128 minutes in 30-second intervals.
- Optional relay card available
- Pre-wired satellite pedestal models available without RDR control unit for upgrading existing OSMAC systems

Electrical

- Input power: 120/240 V ac, 50/60 Hz
  E-OSMAC:
  - 0.20 amps, 110-120 V ac , 60 Hz (no load)
  - 0.96 amps, 110-120 V ac, 60 Hz (max load)
  - 0.10 amps, 220-240 V ac, 50/60 Hz (no load)
  - 0.47 amps, 220-240 V ac, 50/60 Hz (max load)

  RDR OSMAC:
  - 0.17 amps, 115 V ac , 60 Hz (no load)
  - 0.76 amps, 115 V ac, 60 Hz (max load)
  - 0.09 amps, 230 V ac, 50 Hz (no load)
  - 0.41 amps, 230 V ac, 50 Hz (max load)
- Station output power: 24 V ac; 3.0 amps (72 VA) total
- UL and CE approved

Dimensions

- Plastic Cabinet: 43,2cm W x 101,6cm H x 40,6cm D (17" W x 40" H x 16" D)
- Metal Cabinet: 33,0cm W x 91,4cm H x 33,0cm D (13" W x 36" H x 13" D)
- RDR Large pedestal: 40,6cm W x 115,6cm H x 40,6cm D (16" W x 45.5" H x 16" D)

Options

- Wideband frequency modules (N1551XX) for E-OSMAC or OSMAC RDR
- Low-voltage Retrofit Kit for OSMAC RDR (RDR0160LVN0)

Specifying Information—OSMAC RDR Satellite

RDR-XX-P-XX-X-X					
Description	***Configuration***	***Cabinet***	***Output***	***Communication***	***Surge Protection***
RDR	XX	**P**	XX	X	**0**
RDR—OSMAC RDR Satellite	16—16 Stations 24—24 Stations 32—32 Stations 40—40 Stations 48—48 Stations	P—Plastic	01—Normally Open Hydraulic 6A—24 VAC Electric	P—Wide Band N—Narrow Band	0—No Surge
When specifying a 32-station OSMAC RDR Hydraulic satellite in a plastic cabinet, normally open hydraulic output with narrow-band communication, you would specify: RDR32P01N0					

Note: FCC license required.

Specifying Information—E-OSMAC Satellites

E-XX-X-6A-X-MX					
Description	***Configuration***	***Cabinet***	***Output***	***Communication***	***Options***
E	XX	X	**6A**	X	**MX**
E—E-OSMAC Satellite	16—16 Stations 24—24 Stations 32—32 Stations 40—40 Stations 48—48 Stations 56—56 Stations 64—64 Stations	P—Plastic, Green T—Desert Sand B—Tree Bark	6A—Electric	N—Narrow Band P—Wide Band	3—Large-capacity Terminal Block & Switches 4—Large-capacity Terminal Block w/Additional Surge & Switches
Example: When specifying a 32-station, E-OSMAC Satellite with Narrow Band digital wireless paging, a green plastic pedestal, electric output, additional surge protection and a large-capacity terminal block switches, you would specify: E-32P6ANM4					

Note: FCC license required. Frequency modules do not need to be ordered separately.
Product shipped with four pre-programmed synthesized frequency modules (462.2125, 462.4375, 467.2125 and 467.4375).

SPRINKLERS

sp
Sprinkler Comparison Charts

in
INFINITY® Series Rotors

fl
FLEX800 Series Rotors

flr
FLEX R Series Conversion Assemblies

t7
T7 Rotor

690
690 Series Rotors

590
590GF Sprays

ps
Precision™ Spray Nozzles

pr
Precision™ Rotating Nozzles

dl
DL2000™ Subsurface Drip

sw
Toro® Swing Joints

st
Sprinkler Tools

SPRINKLER COMPARISON

Model	INF35-6/ INF55-6	INF35/ INF55	INF34/ INF54	FLX35-6/ FLX55-6	FLX35/ FLX55	FLX34/ FLX54
Page Number	39	44	49	54	59	64
Radius	13-30m (42'-100')	13-28m (43'-92')	16-30m (52'-99')	13-30m (42'-100')	13-28m (43'-92')	16-30m (52'-99')
Short Radius (mainless)	14-16m (46'-51')	10,4-15m (34'-50')		14-16m (46'-51')	10,4-15m (34'-50')	
Radius Reduction Screw		X	X		Optional	Optional
Back nozzle Capable	X	X		X	X	
Inlet size	1" and 1.5", ACME	1" and 1.5", ACME	1" and 1.5", ACME	1" and 1.5", ACME	1" and 1.5", ACME	1" and 1.5", ACME
Flow Range	27-231 LPM (7.1-61.1 GPM)	31-232 LPM (8.2-61.3 GPM)	49-234 LPM (13.0-61.8 GPM)	27-231 LPM (7.1-61.1 GPM)	31-232 LPM (8.2-61.3 GPM)	49-234 LPM (13.0-61.8 GPM)
Recommended Operating Pressure	4,5-5,5 Bar (65-80 PSI)	4,5-5,5 Bar (65-80 PSI)	4,5-5,5 Bar (65-80 PSI)	4,5-5,5 Bar (65-80 PSI)	4,5-5,5 Bar (65-80 PSI)	4,5-5,5 Bar (65-80 PSI)
Turf	X	X	X	X	X	X
High Wind	X	X	X	X	X	X
GDC 2-wire Systems	X	X	X	X	X	X
Normally Open Hydraulic System				X	X	X
Spike Guard™ Solenoid	X	X	X	X	X	X
Full Circle	X	X	X	X	X	X
Part-circle Adjustable	X	X		X	X	
Part/Full Circle In One	40°-330° and 360°	45°-335° and 360°		40°-330° and 360°	40°-330° and 360°	
Ratcheting Riser	X	X		X	X	
Check Valve				X	X	X
Smart-Arc Memory						
Trajectory Adjustment	7°-30°	25° & 15°	25° & 15°	7°-30°	25° & 15°	25° & 15°
Nozzle Base Clutching	X	X		X	X	
SMART ACCESS Compartment	X	X	X			
SMART ACCESS Cover	X	X	X			
Removable Marker	X	X	X			
Pilot Valve Serviceable Under Pressure	X	X	X			
Warranty	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*

When purchased and installed with Toro Swing Joints.

SPRINKLER COMPARISON

Model	FLEX800 B Series	T7 Rotor	690	590GF
Page Number	69	76	85	89
Radius	13-29m (42'-95')	Low-flow: 38'–53' High-flow: 46'–83'	27m-33m (87'-108')	0,6m-79m (2'-26')
Short Radius (mainless)	X	X		X
Radius Reduction Screw	Optional	X		X
Back nozzle Capable	X			
Inlet size	1" NPT, BSP, ACME	1" ACME	1.5" NPT	0.5" NPT
Flow Range	27-213 LPM (7.1-56.3 GPM)	Low-flow: 6,4-48,1 LPM (1.7–12.7 GPM) High-flow: 25,8-115,5 LPM (6.8–30.5 GPM)	193-311 LPM (51.0-82.2 GPM)	0,19-17,0 LPM (.05-4.5 GPM)
Recommended Operating Pressure	3,5-6,9 Bar (50-100 PSI)	2,8-6,9 Bar (40-100 psi)	5,5-6,9 Bar (80-100 PSI)	1,4-3,4 Bar 20-50 PSI
Turf	X	X	X	X
High Wind	X			
Decoder Systems				
Low Pressure		X		X
Normally Open Hydraulic System			X	
Spike Guard™ Solenoid				
Full Circle	X	X	1 and 2 Speed	X
Part-circle Adjustable	X	X		X
Part-circle Fixed			90° and 180°	X
Part/Full Circle In One	40°-330° and 360°			
Ratcheting Riser	FLX35-6B/FLX35B			X
Check Valve	X	X	X	X
Smart-Arc Memory		X		
Below Grade		X		
Trajectory Adjustment	7°-30°/25° & 15°			
Warranty	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*	2 Years/ 5 Years*

When purchased and installed with Toro Swing Joints.

INFINITY® SERIES WITH SMART ACCESS®

Learn more at
toroinfinity.com

Watch the video at
Toro YouTube

The patented INFINITY Series sprinklers are designed to save you time and with your course's future in mind.

Whether you choose a Toro Satellite or 2-wire control system the patented SMART ACCESS® design enables you to add new technology for decades to come. You won't need to invest in new sprinklers as technology advances, because the INFINITY Series are built for flexible expansion, not replacement, to keep your course looking its best and your golfers playing.

1 SMART ACCESS

Provides top accessibility to all critical components.

- No digging or unsightly turf repair scars
- No buried wire splices or ground faults
- Pilot valve removable with water "ON"
- Lower long term cost of ownership
- Customizable marker
- Replaceable cover if damaged
- Increased labor efficiency

2 Wire splices protected in the SMART ACCESS compartment and accessible from the top

The protective enclosure isolates wire splices from the soil and potential shorts to ground. Provides access for system troubleshooting and repairs **without digging!**

3 Pilot valve accessible from the top

Toro's patented CHECK FLOW™ feature facilitates troubleshooting, pressure adjustments, solenoid and pilot valve servicing **without turning the water off or digging!**

4 GDC 2-wire module accessible from the top

Allows for GDC module retrieval, system troubleshooting and system repairs **without digging**!

5 Future-proof your investment

The SMART ACCESS compartment provides room to grow. Whatever the future holds, this sprinkler will be ready. Getting smarter **without digging!**

Trajectory adjustment
INFINITY® SERIES models are available. In 24-position TruJectory™ or
Dual trajectory to help fight the wind, avoid obstacles or to reduce the radius.

Industry's largest high performance nozzle selection
From 6,0 m to 30,5 m (20' to 100') we've got you covered! Only Toro provides the flexibility to optimize your system for maximum uniformity.

Nozzle base clutching
Hot spot watering has never been easier, simply turn, hold and shoot to put down as much water as needed.

Ratcheting riser
Align part circle quickly and easily or adjust watering locations to suit seasonal needs. Standard on all INFINITY® part circle models.

Part- and full-circle models in one
The sprinklers can be full circle today and part circle tomorrow allowing you to simply and economically adjust the area of coverage to match your seasonal needs or meet water rationing mandates.

Once installed, there is no difference in size between the INFINTY Series and your existing 800S and DT models: The same height as your existing 1" or 1.5" 800S and DT models, and the same diameter as your 1.5" models

Flexible and Configurable Models

Two Body Sizes	Five Activation Types	Two Main Nozzle Trajectories	Two Part Circle Models
–25 mm (1") with ACME thread –40 mm (1.5") with ACME thread	–Standard solenoid –Spike Guard solenoid –Nickel plated Spike Guard solenoid –DC Latching solenoid –Integrated GDC module w/ DCL solenoid	–24-position TruJectory™; 7°-30° –Dual trajectory; 25° or 15°	–One with 24 position TruJectory™ –One with Dual trajectory

INFINITY® SERIES GOLF ROTORS INF35-6/INF55-6

Learn more at
toroinfinity.com

INFINTY 35-6/55-6 Series with Smart Access

With the industry's largest selection of high performance nozzles and TruJectory™ adjustment the New INFINTY 35-6/55-6 Series with Smart Access allows you to put water precisely where you want it for maximum distribution uniformity. And the part/full circle drive allows you to simply and economically adjust the area of coverage to match your seasonal watering needs or meet water rationing mandates in seconds with no disassembly or additional parts required.

Features & Benefits | Specifications | Performance Data

SMART ACCESS provides top accessibility to all critical components and room to grow for whatever the future holds.

Features & Benefits

1. **Industry's Largest Nozzle Selection**
Nozzles from 12,8m - 30,5m (42' to 100') radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All nozzles threaded in from the front.

2. **Hot Spot Watering**
Nozzle base can be turned in either direction and held to put down as much water as needed, precisely where you want it. Standard on all Toro Part circle Golf rotors!

3. **Adjustment With No Disassembly**
Toro exclusive, simply pull up the riser and ratchet it to the precise position you want to water.

4. **True Part and Full-Circle in One – 40° - 330° Part Circle**
These sprinklers can be full circle today and part circle tomorrow allowing you to simply and economically adjust the area of coverage to match your seasonal needs or meet water rationing mandates.

TruJectory® – 24 Positions
From 7° - 30° in 1° increments put water where you want it. Adjust from the top of the sprinkler in seconds, wet or dry. This flexibility lets you tackle every obstacle on the course; wind, trees, bunkers, mounds and more.

INFINITY® SERIES GOLF ROTORS INF35-6/INF55-6

INF35-6 Conversion Upgrades

Models	Description
INF35-6-3134	INF35-6 w/31–34 Nozzles (33 Nozzle Installed)
INF35-6-3537	INF35-6 w/35–37 Nozzles (35 Nozzle Installed)

INF55-6 Conversion Upgrades

Models	Description
INF55-6-5154	INF55-6 w/51–54 Nozzles (53 Nozzle Installed)
INF55-6-5558	INF55-6 w/55–58 Nozzles (55 Nozzle Installed)
INF55-6-59	INF55-6 w/59 Nozzle installed

Operating Specifications

Inlet:
- INF35-6: 25mm (1") ACME
- INF55-6: 40mm (1.5") ACME

Radius:
INF35-6: 12,8 – 28,0m (42' – 92')
INF55-6: 15,9 – 30,5m (52' – 100')
Flow Rate:
- INF35-6: 26,9-171,5 LPM (7.1 – 45.3 GPM)
- INF55-6: 52,6-231,3 LPM (13.9 – 61.1 GPM)

Precipitation Rates:
- INF35-6:
  Minimum: 9mm/hr (0.37"/hr);
  Maximum: 13,5mm/hr (0.53"/hr)
- INF55-6:
  Minimum: 11mm/hr (0.43"/hr);
  Maximum: 15mm/hr (0.60"/hr)

Pilot Valve: Selectable at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi)
Recommended Operating Pressure Range:
- 4,5-6,9 Bar (65-100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation Type
- Standard Solenoid
- Spike Guard Solenoid
- Nickel-plated Spike Guard Solenoid
- DC Latching Solenoid (DCLS)
- Integrated GDC Module w/DCLS

Trajectory: 24 positions from 7° - 30° in 1° increments

Additional Features

INF35-6 has eight nozzle variations (30, 31, 32, 33, 34, 35, 36 and 37)
INF55-6 has nine nozzle variations (51, 52, 53, 54, 55, 56, 57, 58 and 59)
Four in-line nozzles, rotating stream pattern
One back nozzle position
Stator variations: INF35-6 – 3 and NF55-6 – 3

Dimensions

SMART ACCESS™ Cover and Compartment Diameter:
- INF35-6: 19cm (7.5")
- INF55-6: 19cm (7.5")

Body height:
- INF35-6: 25cm (10")
- INF55-6: 29cm (11.38")

Weight:
- INF35-6: 1,95kg (4.31 lbs.)
- INF55-6: 1,33kg (5.13 lbs.)

Pop-up height to nozzle: 8,25cm (3.25")

Warranty

Two years; Five years when installed with Toro Swing Joints

Specifying Information—INF35-6 & INF55-6

INFX5-XXX-X6X

Body Inlet	*Arc*	*Nozzle*	*Pressure Regulation**	*Activation Type*	*Trajectory*
INFX	**5**	XX	X	X	**6**
3—1" 5—1½"	5—Part-circle and Full-circle in One	INF35—30, 31, 32, 33 , 34, 35, 36, 37 INF55—51, 52, 53, 54, 55, 56, 57, 58, 59	6— 4,5 bar (65 psi) 8— 6,5 Bar (80 psi) 1— 6,9 Bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS	6—24-position TruJectory

Example: When specifying an INF35-6 Series Sprinkler with #34 nozzle, pressure regulation at 4,5 bar (65 psi) and Spike Guard you would specify: INF35-346-26

** All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).*
Note: Not all models available.

INF35-6/INF55-6 Trajectory Performance—(Metric)

Nozzle/Bar/LPM	#31/51 Nozzle @ 4,5 Bar												#32/52 Nozzle @ 4,5 Bar											
Trajectory	7°		10°		15°		20°		25°		30°		7°		10°		15°		20°		25°		30°	
"A" Radius	14,0		14,0		15,2	15,5	16,2		16,5		15,2		14,0	14,9	14,9	15,2	15,5		16,8		19,2	19,5	16,5	19,8
"B" Spray Height	1,2		1,2		1,5	1,8	2,4	3,0	3,4	4,0	4,0	4,6	0,9	1,2	1,2		1,8		2,7		3,7	3,4	4,6	4,0
"C" Distance from Head	7,6	7,9	7,6	8,2	7,9	9,8	10,1	11,6	10,1	12,2	10,1	12,4	6,1	6,7	7,3	7,9	8,5	9,4	10,4	10,7	10,4		10,4	9,1

Nozzle/Bar/LPM	#33/53 Nozzle @ 4,5 Bar												#34/54 Nozzle @ 4,5 Bar											
Trajectory	7°		10°		15°		20°		25°		30°		7°		10°		15°		20°		25°		30°	
"A" Radius	16,5		17,1		18,0		18,9		20,1	20,7	18,6		17,7		18,3		19,2		20,4		22,6		21,3	
"B" Spray Height	1,2	1,5	1,5	1,8	2,1		2,7		4,0		4,6		1,2	1,5	1,2	1,8	1,8	2,4	3,4	3,0	4,3		5,2	
"C" Distance from Head	7,0	9,1	8,5	10,1	9,8		10,4	10,7	10,7	11,3	10,7	11,3	7,3	9,4	7,9	10,4	10,7	12,2	11,9	12,5	11,9		11,9	12,8

Nozzle/Bar/LPM	#35/55 Nozzle @ 4,5 Bar												#36/56 Nozzle @ 5,5 Bar											
Trajectory	7°		10°		15°		20°		25°		30°		7°		10°		15°		20°		25°		30°	
"A" Radius	18,0		18,6	18,9	19,5	20,1	21,3		23,2		22,6	23,5	19,5	21,9	20,7	22,2	23,2	22,9	24,4	25,0	25,6	25,9	25,0	
"B" Spray Height	1,2	1,8	1,5	1,8	2,1	2,7	3,4		4,6		5,2		1,5		2,1		2,7		4,3		5,2		6,7	
"C" Distance from Head	9,1	10,4	9,8	11,0	11,0	13,1	13,1	13,7	13,1	13,7	13,1	13,7	7,6		11,6		12,2		13,7		14,9		13,7	

Nozzle/Bar/LPM	#37/57 Nozzle @ 5,5 Bar												#58 Nozzle @ 5,5 Bar					
Trajectory	7°		10°		15°		20°		25°		30°		7°	10°	15°	20°	25°	30°
"A" Radius	19,8	21,9	21,0	22,6	23,8	23,5	25,0	25,3	26,2	27,1	25,6	25,9	22,9	23,5	25,3	26,5	28,0	26,8
"B" Spray Height	1,5		2,1		2,7		4,3		5,5		6,7		1,8	2,1	3,0	4,6	5,5	6,7
"C" Distance from Head	9,1		11,9		12,5		14,0		15,2		14,0		11,6	12,2	13,1	14,3	15,8	14,6

Nozzle/Bar/LPM	#59 Nozzle @ 5,5 Bar					
Trajectory	7°	10°	15°	20°	25°	30°
"A" Radius	23,5	23,8	25,6	27,1	29,3	28,0
"B" Spray Height	2,1	2,4	3,4	4,9	6,4	7,6
"C" Distance from Head	12,8	13,4	13,7	14,3	16,2	14,9

Information is for reference only, Actual results may vary,

INF35-6/INF55-6 Trajectory Performance—(U.S.)

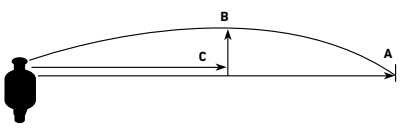
Nozzle/PSI/GPM	#31/51 Nozzle @ 65 psi						#32/52 Nozzle @ 65 psi					
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	46'	46'	50'/51'	53'	54'	50'	46'/49'	49'/50'	51'	55'	63'/64'	54'/65'
"B" Spray Height	4'	4'	5'/6'	8'/10'	11'/13'	13'/15'	3'/4'	4'	6'	9'	12'/11'	15'/13'
"C" Distance from Head	25'/26'	25'/27'	26'/32'	33'/38'	33'/40'	33'/41'	20'/22'	24'/26'	28'/31'	34'/35'	34'	34'/30'

Nozzle/PSI/GPM	#33/53 Nozzle @ 65 psi						#34/54 Nozzle @ 65 psi					
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	54'	56'	59'	62'	66'/68'	61'	58'	60'	63'	67'	74'	70'
"B" Spray Height	4'/5'	5'/6'	7'	9'	13'	15'	4'/5'	4'/6'	6'/8'	11'/10'	14'	17'
"C" Distance from Head	23'/30'	28'/33'	32'	34'/35'	35'/37'	35'/37'	24'/31'	26'/34'	35'/40'	39'/41'	39'	39'/42'

Nozzle/PSI/GPM	#35/55 Nozzle @ 65 psi						#36/56 Nozzle @ 80 psi					
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	59'	61'/62'	64'/66'	70'	76'	74'/77'	64'/72'	68'/73'	76'/75'	80'/82'	84'/85'	82'
"B" Spray Height	4'/6'	5'/6'	7'/9'	11'	15'	17'	5'	7'	9'	14'	17'	22'
"C" Distance from Head	30'/34'	32'/36'	36'/43'	43'/45'	43'/45'	43'/45'	25'	38'	40'	45'	49'	45'

Nozzle/PSI/GPM	#37/57 Nozzle @ 80 psi						#58 Nozzle @ 80 psi					
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	65'/72'	69'/74'	78'/77'	82'/83'	86'/89'	84'/85'	75'	77'	83'	87'	92'	88'
"B" Spray Height	5'	7'	9'	14'	18'	22'	6'	7'	10'	15'	18'	22'
"C" Distance from Head	30'	39'	41'	46'	50'	46'	38'	40'	43'	47'	52'	48'

Nozzle/PSI/GPM	#59 Nozzle @ 80 psi					
Trajectory	7°	10°	15°	20°	25°	30°
"A" Radius	77'	78'	84'	89'	96'	92'
"B" Spray Height	7'	8'	11'	16'	21'	25'
"C" Distance from Head	42'	44'	45'	47'	53'	49'



Information is for reference only. Actual results may vary.

INF35-6 Series Performance Chart—(Metric)

Base Pressure			Nozzle Set 30 (White) 102-2208		Nozzle Set 31 (Yellow) 102-4587		Nozzle Set 32 (Blue) 102-4588		Nozzle Set 33 (Brown) 102-4589		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-0729		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261	
			Blue	Gray	Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray
			102-2925	102-2910	102-2925	102-2910	102-2928	102-2910	102-2926	102-2910	102-2926	102-2910	102-2925	102-2910	102-2925	102-2910	102-2926	102-2910
Bar	kPa	kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	12,8	26,9	15,9	51,9	18,6	64,7	19,5	76,5	21,0	103,7	—	—	—	—	—	—
4,5	450	4,59	13,7	32,9	16,5	58,7	19,2	77,6	20,1	86,7	22,6	113,6	23,2	122,6	24,4	128,7	—	—
5,5	550	5,61	14,0	36,3	17,4	64,3	20,4	85,5	21,4	95,8	23,5	125,7	24,1	135,5	25,6	141,9	26,2	154,4
6,9	690	7,04	14,6	42,4	18,0	71,5	22,0	95,4	22,6	106,7	24,4	140,0	25,6	151,0	26,8	160,9	28,1	171,5
Stator			102-6929 Blue		102-1939 Yellow								102-1940 White					
Conversions					INF35-6-3134								INF35-6-3537					

Not recommended at these pressures. Radius shown in meters. Toro recommends the use of a 1¼" (30mm) swing joint at flows over 25-GPM (95-LPM).
Sprinkler radius of throw per ASAE standard S398.1.

INF35-6 Series Performance Chart—(U.S.)

Base Pressure	Nozzle Set 30 (White) 102-2208		Nozzle Set 31 (Yellow) 102-4587		Nozzle Set 32 (Blue) 102-4588		Nozzle Set 33 (Brown) 102-4589		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-0729		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261	
	Blue	Gray	Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray
	102-2925	102-2910	102-2925	102-2910	102-2928	102-2910	102-2926	102-2910	102-2926	102-2910	102-2925	102-2910	102-2925	102-2910	102-2926	102-2910
psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	42	7.1	52	13.7	61	17.1	64	20.2	69	27.4	—	—	—	—	—	—
65	45	8.7	54	15.5	63	20.5	66	22.9	74	30.0	76	32.4	80	34.0	—	—
80	46	9.6	57	17.0	67	22.6	70	25.3	77	33.2	79	35.8	84	37.5	86	40.8
100	48	11.2	59	18.9	72	25.2	74	28.2	80	37.0	84	39.9	88	42.5	92	45.3
Stator	102-6929 Blue		102-1939 Yellow								102-1940 White					
Conversions			INF35-6-3134								INF35-6-3537					

INF55-6 Series Performance Chart—(Metric)

Base Pressure			Nozzle Set 51 (Yellow) 102-4587		Nozzle Set 52 (Blue) 102-4588		Nozzle Set 53 (Brown) 102-4589		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-0729		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260		Nozzle Set 59 (Beige) 102-4259	
			Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray	Blue	Gray	Blue	Gray
			102-2925	102-2910	102-2928	102-2910	102-2926	102-2910	102-2926	102-2910	102-2925	102-2910	102-2925	102-2910	102-2926	102-2910	102-2925	102-2910	102-2925	102-2910
Bar	kPa	kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	15,9	52,6	18,9	65,9	20,1	78,3	21,0	108,3	—	—	—	—	—	—	—	—	—	—
4,5	450	4,59	16,5	59,4	19,5	78,3	20,7	88,6	22,6	113,1	23,2	127,9	24,7	135,1	—	—	—	—	—	—
5,5	550	5,61	17,4	65,1	20,7	86,7	22,0	97,7	23,5	130,2	24,1	140,8	25,9	149,1	27,1	165,0	28,1	179,8	29,3	215,7
6,9	690	7,04	18,0	72,3	22,3	96,5	23,2	108,6	24,4	144,6	25,6	156,3	27,1	165,4	28,7	183,6	29,0	194,9	30,5	231,3
Stator			102-1939 Yellow								102-1940 White								102-1941	
Conversions			INF55-6-5154								INF55-6-5558								INF55-6-59	

Not recommended at these pressures. Radius shown in meters. Toro recommends the use of a 1¼" (30mm) swing joint at flows over 25-GPM (95-LPM).
Sprinkler radius of throw per ASAE standard S398.1.

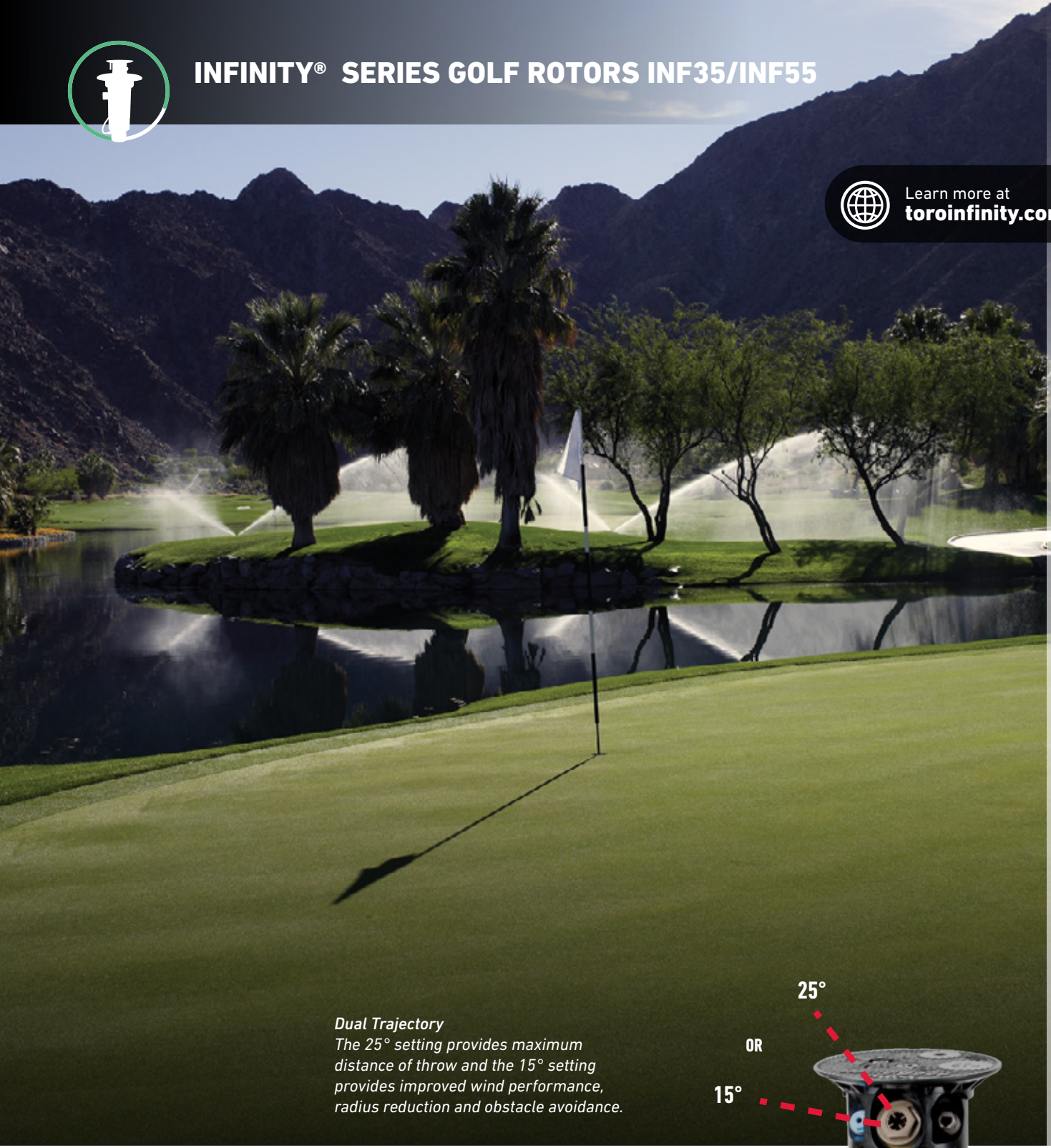
INF55-6 Series Performance Chart—(U.S.)

Base Pressure	Nozzle Set 51 (Yellow) 102-4587		Nozzle Set 52 (Blue) 102-4588		Nozzle Set 53 (Brown) 102-4589		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-0729		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260		Nozzle Set 59 (Beige) 102-4259	
	Blue	Gray	Red	Gray	Orange	Gray	Orange	Gray	Blue	Gray	Blue	Gray	Orange	Gray	Blue	Gray	Blue	Gray
	102-2925	102-2910	102-2928	102-2910	102-2926	102-2910	102-2926	102-2910	102-2925	102-2910	102-2925	102-2910	102-2926	102-2910	102-2925	102-2910	102-2925	102-2910
psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	52	13.9	62	17.4	66	20.7	69	28.6	—	—	—	—	—	—	—	—	—	—
65	54	15.7	64	20.8	68	23.4	74	31.2	76	33.8	81	35.7	—	—	—	—	—	—
80	57	17.2	68	22.9	72	25.8	77	34.4	79	37.2	85	39.4	89	43.6	92	47.5	96	57.0
100	59	19.1	73	25.5	76	28.7	80	38.2	84	41.3	89	43.7	94	48.5	95	51.1	100	61.1
Stator	102-1939 Yellow								102-1940 White								102-1941	
Conver.	INF55-6-5154								INF55-6-5558								INF55-6-59	

Not recommended at these pressures. Radius shown in feet.
Toro recommends the use of a 1¼" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1.
Actual site conditions must be considered when selecting the appropriate nozzle.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).

INFINITY® SERIES GOLF ROTORS INF35/INF55

Learn more at
toroinfinity.com



Dual Trajectory
The 25° setting provides maximum distance of throw and the 15° setting provides improved wind performance, radius reduction and obstacle avoidance.

Features & Benefits | Specifications | Performance Data

Watch the video at
Toro YouTube

The New INFINITY 35/55 Series with Smart Access

features a dual trajectory main nozzle that provides exceptional nozzle performance at the 25° standard angle position and great performance in windy applications at the 15° low angle position. And the part/full circle drive allows you to adjust the area of coverage to match your seasonal watering needs or meet water rationing mandates in seconds with no additional parts required.

Features & Benefits

1. **Industry's Largest Nozzle Selection**
Nozzles from 12,8m - 30,5m (42' to 100') radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All nozzles threaded in from the front.

2. **Stainless Steel Valve Seat**
Eliminates body damage from rocks and debris. This in-destructible stainless steel seat is molded to the body and virtually eliminates body replacements due to seat damage. Standard on all Toro Golf rotors!

3. **Radius Reduction Screw**
Allows for fine tuning the radius to exactly the distance you need. In combination with main nozzle sizing and trajectory adjustment the radius reduction screw can effectively reduce the sprinkler throw down to 30'.

4. **True Part and Full-Circle in One – 40° - 330° part circle**
These sprinklers can be full circle today and part circle tomorrow allowing you to simply and economically adjust the area of coverage to match your seasonal needs or meet water rationing mandates.

SMART ACCESS provides top accessibility to all critical components and room to grow for whatever the future holds.

INFINITY® SERIES GOLF ROTORS INF35/INF55

INF35 Conversion Upgrades

Models	Description
• INF35-3134	INF35 w/31–34 Nozzles (#3 Nozzle Installed)
• INF35-3537	INF35 w/35–37 Nozzles (#5 Nozzle Installed)

INF55 Conversion Upgrades

Models	Description
• INF55-5154	INF55 w/51–54 Nozzles (#3 Nozzle Installed)
• INF55-5558	INF55 w/55–58 Nozzles (#5 Nozzle Installed)
• INF55-59	INF55 w/59 Nozzle

Operating Specifications

Inlet:
- INF35: 25mm (1") ACME
- INF55: 40mm (1.5") ACME

Radius:
- INF35: 13,1 – 25,3m (43' – 83')
- INF55: 16,7 – 28,0m (55' – 92')

Flow Rate:
- INF35: 31,0 – 179,0 LPM (8.2 – 47.8 GPM)
- INF55: 53,0 – 232,0 LPM (14.1 – 61.3 GPM)

Precipitation Rates:
- INF35: Minimum: 10,4 mm/hr (0.41"/hr); Maximum: 11,4 mm/hr (0.45"/hr)
- INF55: Minimum: 11,7 mm/hr (0.46"/hr); Maximum: 14,7 mm/hr (0.58"/hr)

Pilot Valve: Selectable at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi)

Recommended Operating Pressure Range:
- 4,5-6,9 Bar (65-100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation Type
- Standard Solenoid
- Spike Guard Solenoid
- Nickel-plated Spike Guard Solenoid
- DC Latching Solenoid (DCLS)
- Integrated GDC Module w/DCLS

Nozzle Selection

INF35 has eight nozzle variations (30, 31, 32, 33, 34, 35, 36 & 37)
INF55 has nine nozzle variations (51, 52, 53, 54, 55, 56, 57, 58 & 59)
Three in-line nozzles, rotating stream pattern
Two back nozzle positions
Stator variations: 3
Radius reduction screw 363-4839 for fine tuning

Dimensions

SMART ACCES® Cover And Compartment Diameter:
- INF35: 19cm (7.5")
- INF55: 19cm (7.5")

Body height:
- INF35: 25cm (10")
- INF55: 29cm (11.38")

Weight:
- INF35: 1,93kg (4.26 lbs.)
- INF55: 2,30 (5.08 lbs.)

Pop-up height to nozzle: 8,25cm (3.25")

Warranty

Two years; Five years when installed with Toro Swing Joints

Specifying Information—INF35 & INF55

INFX5-XXX-XX				
Body Inlet	*Arc*	*Nozzle*	*Pressure Regulation**	*Activation Type*
INFX	5	XX	X	X
3—1" 5—1½"	5—Part-circle and Full-circle In One	INF35—30. 31, 32, 33 , 34, 35, 36, 37 INF55—51, 52, 53, 54, 55, 56, 57, 58, 59	6— 4,5 bar (65 psi) 8— 6,5 bar (80 psi) 1— 6,9 bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS
Example: When specifying an INF35 Series Sprinkler with #34 nozzle, pressure regulation at 4,5 bar (65 psi) and Spike Guard you would specify: INF35–346–2				

** All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).*
Note: Not all models available.

INF35 Performance Data—25° – (Metric)

Front Nozzle Positions			Nozzle Set 30 (White Plug) 102-2208		Nozzle Set 31 (Yellow) 102-6906		Nozzle Set 32 (Blue) 102-0726		Nozzle Set 33 (Brown) 102-6907		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-6955		Nozzle Set 36 (Gray) 102-6935		Nozzle Set 37 (Black) 102-6936	
			Yellow	Biege	Yellow	Brown	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green
			102-5670	102-6942	102-5670	102-5671	102-5670	102-6884	102-5670	102-6884	102-5670	102-6884	102-5670	102-6885	102-6531	102-6885	102-6531	102-6885
Back Nozzle Positions			Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug
			102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335
Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	13,1	31,0	16,2	52,2	17,1	69,3	18,6	82,1	—	—	—	—	—	—	—	—
4,5	450	4,59	13,7	37,9	16,2	58,7	18,0	77,6	19,5	92,4	20,7	106,7	22,0	129,1	—	—	—	—
5,5	550	5,61	14,0	43,5	17,4	65,5	18,9	85,9	20,4	102,6	21,7	117,7	22,9	143,1	23,8	152,5	24,4	166,5
6,9	690	7,04	14,3	50,7	18,0	72,3	19,8	94,2	21,4	112,8	22,6	129,1	24,1	154,8	24,7	165,8	25,3	179,0

INF35 Series Performance Chart—15°

Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	13,1	31,0	15,9	51,5	17,7	68,5	18,6	81,4	—	—	—	—	—	—	—	—
4,5	450	4,59	13,7	37,9	16,5	57,9	18,3	76,8	19,5	91,6	19,8	103,3	21,0	125,3	—	—	—	—
5,5	550	5,61	14,0	43,5	17,7	65,1	19,5	85,5	21,0	101,4	21,0	114,3	22,9	139,3	23,2	150,3	23,2	162,4
6,9	690	7,04	14,3	50,7	18,3	71,9	20,1	93,5	21,7	111,7	22,0	124,5	23,8	149,5	25,0	161,2	25,0	174,5
Stator			102-6929 Blue		102-1939 Yellow								102-1940 White					
Conversions			INF35-3134										INF35-3537					

INF35 Performance Data—25° – (U.S.)

Front Nozzle Positions	Nozzle Set 30 (White Plug) 102-2208		Nozzle Set 31 (Yellow) 102-6906		Nozzle Set 32 (Blue) 102-0726		Nozzle Set 33 (Brown) 102-6907		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-6955		Nozzle Set 36 (Gray) 102-6935		Nozzle Set 37 (Black) 102-6936	
	Yellow	Biege	Yellow	Brown	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green
	102-5670	102-6942	102-5670	102-5671	102-5670	102-6884	102-5670	102-6884	102-5670	102-6884	102-5670	102-6885	102-6531	102-6885	102-6531	102-6885
Back Nozzle Positions	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug
	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335
PSI	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**
50	43	8.2	53	13.8	56	18.3	61	21.7	65	25.3	—	—	—	—	—	—
65	45	10.0	53	15.5	59	20.5	64	24.4	68	28.2	72	34.1	—	—	—	—
80	46	11.5	57	17.3	62	22.7	67	27.1	71	31.1	75	37.8	78	40.3	80	44.0
100	47	13.4	59	19.1	65	24.9	70	29.8	74	34.1	79	40.9	81	43.8	83	47.3

INF35 Series Performance Chart—15°

PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	43	8.2	52	13.6	58	18.1	61	21.5	62	25.6	—	—	—	—	—	—
65	45	10.0	54	15.3	60	20.3	64	24.2	65	27.3	69	33.1	—	—	—	—
80	46	11.5	58	17.2	64	22.6	69	26.8	69	30.2	75	36.8	76	39.7	76	42.9
100	47	13.4	60	19.0	66	24.7	71	29.5	72	32.9	78	39.5	82	42.6	82	46.1
Stator	102-6929 Blue		102-1939 Yellow								102-1940 White					
Conversions	INF35-3134										INF35-3537					

Not recommended at these pressures.
Toro recommends the use of a 1¼" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius of throw per ASAE standard S398.1.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).

INF35 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 bar	31	1,8m @ 15,5m	4m @ 16,4m
	32	1,8m @ 15,5m	3,4m @ 19,5m
	33	2,1m @ 18m	4m @ 20,7m
	34	2,4m @ 19m	4,6m @ 22,6m
	35	2,7m @ 20m	4,6m @ 23m
5,5 bar	36	2,4m @ 22,9m	5,5m @ 25,3m
	37	2,7m @ 22,5m	5,8m @ 25m

INF35 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	31	6' @ 51'	13' @ 54'
	32	6' @ 51'	11' @ 64'
	33	7' @ 59'	13' @ 68'
	34	8' @ 63'	15' @ 74'
	35	9' @ 66'	15' @ 76'
80 PSI	36	8' @ 75'	18' @ 83'
	37	9' @ 74'	19' @ 82'

INF55 Performance Data—25° – (Metric)

Front Nozzle Positions			Nozzle Set 51 (Yellow) 102-6906		Nozzle Set 52 (Blue) 102-0726		Nozzle Set 53 (Brown) 102-6907		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-6955		Nozzle Set 56 (Gray) 102-6935		Nozzle Set 57 (Black) 102-6936		Nozzle Set 58 (Red) 102-6909		Nozzle Set 59 (Beige) 102-4259	
			Yellow	Brown	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green
			102-5670	102-5671	102-5670	102-6884	102-5670	102-6884	102-5670	102-6884	102-5670	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885
Back Nozzle Positions			Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug
			102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335
Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	16,7	53,4	17,3	70,0	18,9	84,4	20,1	97,6	—	—	—	—	—	—	—	—	—	—
4,5	450	4,59	17,4	59,8	18,2	79,1	19,8	95,0	21,0	108,6	22,3	135,8	—	—	—	—	—	—	—	—
5,5	550	5,61	18,0	66,2	18,5	87,4	20,7	105,2	21,9	119,9	23,1	150,3	24,4	163,2	25,2	182,5	25,9	189,3	27,1	217,6
6,9	690	7,04	18,6	73	19,2	95,7	21,7	114,7	22,8	130,6	24,4	164,6	25,2	185,5	26,8	194,9	27,4	204,0	28,0	232,0

INF55 Series Performance Chart—15°

Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	16,7	53,0	17,9	62,5	18,9	84,0	19,2	96,9	—	—	—	—	—	—	—	—	—	—
4,5	450	4,59	17,1	59,0	18,8	78,3	19,8	94,6	20,1	107,9	22,8	133,6	—	—	—	—	—	—	—	—
5,5	550	5,61	18,0	65,9	20,1	87,1	21,0	104,8	21,4	119,2	23,1	147,6	23,7	160,5	24,0	177,5	24,0	187,4	25,0	216,5
6,9	690	7,04	18,2	72,7	20,7	95,0	21,7	114,3	22,0	129,8	24,4	158,6	24,6	184,3	25,3	192,2	25,3	202,1	25,9	230,1
Stator			102-1939 Yellow								102-1940 White								102-1941 White	
Conversions			INF55-5154								INF55-5558								INF55-59	

INF55 Performance Data—25° – (U.S.)

Front Nozzle Positions			Nozzle Set 51 (Yellow) 102-6906		Nozzle Set 52 (Blue) 102-0726		Nozzle Set 53 (Brown) 102-6907		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-6955		Nozzle Set 56 (Gray) 102-6935		Nozzle Set 57 (Black) 102-6936		Nozzle Set 58 (Red) 102-6909		Nozzle Set 59 (Beige) 102-4259	
			Yellow	Brown	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green
			102-5670	102-5671	102-5670	102-6884	102-5670	102-6884	102-5670	102-6884	102-5670	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885
Back Nozzle Positions			Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug	Red Plug
			102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335	102-4335
PSI			Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50			55	14.1	57	18.5	62	22.3	66	25.8	—	—	—	—	—	—	—	—	—	—
65			57	15.8	60	20.9	65	25.1	69	28.7	73	35.9	—	—	—	—	—	—	—	—
80			59	17.5	61	23.1	68	27.8	72	31.7	76	39.7	80	43.1	83	48.2	85	50.0	89	57.5
100			61	19.3	63	25.3	71	30.3	75	34.5	80	43.5	83	49.0	88	51.5	90	53.9	92	61.3

INF55 Series Performance Chart—15°

PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	55	14.0	59	16.5	62	22.2	63	25.6	—	—	—	—	—	—	—	—	—	—
65	56	15.6	62	20.7	65	25.0	66	28.5	75	35.3	—	—	—	—	—	—	—	—
80	59	17.4	66	23.0	69	27.7	70	31.5	78	39.0	78	42.4	79	46.9	79	49.5	82	57.2
100	60	19.2	68	25.1	71	30.2	72	34.3	80	41.9	81	47.2	83	52.1	83	53.4	85	60.8
Stator	102-1939 Yellow								102-1940 White								102-1941 White	
Conversions	INF55-5154								INF55-5558								INF55-59	

Not recommended at these pressures.
Toro recommends the use of a 1¼" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius of throw per ASAE standard S398.1.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).

INF55 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 bar	51	1,8m @ 15,5m	4m @ 16,4m
	52	1,8m @ 15,5m	3,4m @ 19,5m
	53	2,1m @ 18m	4m @ 20,7m
	54	2,4m @ 19m	4,6m @ 22,6m
	55	2,7m @ 20m	4,6m @ 23m
5,5 bar	56	2,4m @ 22,9m	5,5m @ 25,3m
	57	2,7m @ 22,5m	5,8m @ 25m
	58	3m @ 25m	5,5m @ 26,5m
	59	3,4m @ 24,6m	6,4m @ 27,7m

INF55 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	51	6' @ 51'	13' @ 54'
	52	6' @ 51'	11' @ 64'
	53	7' @ 59'	13' @ 68'
	54	8' @ 63'	15' @ 74'
	55	9' @ 66'	15' @ 76'
80 PSI	56	8' @ 75'	18' @ 83'
	57	9' @ 74'	19' @ 82'
	58	10' @ 82'	18' @ 87'
	59	11' @ 81'	21' @ 91'

INFINITY® SERIES GOLF ROTORS INF34/INF54

Learn more at
toroinfinity.com

The INFINITY 34/54 is Toro's Premium full-circle golf sprinkler series with Smart Access. The dual trajectory main nozzle provides exceptional nozzle performance at the 25° standard angle position and great performance in windy applications at the 15° low angle position. And the consistency of the constant velocity full circle drive ensures even water application across the coverage area every time you water.

Features & Benefits | Specifications | Performance Data

SMART ACCESS *provides top accessibility to all critical components and room to grow for whatever the future holds.*

Dual Trajectory - 25° or 15°
Provides two selections for the main nozzle trajectory; the 25 degree setting provides maximum distance of throw and the 15 degree setting provides improved wind performance, radius reduction and obstacle avoidance.

Features & Benefits

1. **Industry's Largest Nozzle Selection**
Nozzles from 15,9m - 30,2m (52' to 99'). Color coded for easy flow and radius identification and threaded from the front to simplify servicing.

2. **Five Activation types**
- Standard solenoid
- Spike Guard™ solenoid
- Nickel plated Spike Guard solenoid
- DC Latching solenoid (DCLS)
- Integrated GDC module w/ DCLS available on all INFINITY models!

3. **Constant Velocity Full Circle Drive**
Ensures consistent rotation speeds when matched with station run times for even water application across the coverage area every time you water.

4. **Radius Reduction Screw for Fine Tuning**
In combination with main nozzle sizing and trajectory adjustment the radius reduction screw can effectively reduce the sprinkler throw down to 9,1m (30').

INFINITY® SERIES GOLF ROTORS INF34/INF54

INF34 Conversion Upgrades	
Models	**Description**
INF34-3134	INF34 w/31–34 Nozzles (33 Nozzle Installed)
INF34-3537	INF34 w/35–37 Nozzles (35 Nozzle Installed)

INF54 Conversion Upgrades	
Models	**Description**
INF54-5154	INF54 w/51–54 Nozzles (53 Nozzle Installed)
INF54-5558	INF54 w/55–58 Nozzles (55 Nozzle Installed)
INF54-59	INF54 w/ 59 Nozzle installed

Features

Dual Trajectory adjustment on main nozzle - 25° or 15°
Constant velocity full circle drive
Radius reduction screw can effectively reduce the sprinkler throw down to 30'

Operating Specifications

Inlet:
- **INF34:** 25mm (1") ACME
- **INF54:** 40mm (1.5") ACME

Radius:
- **INF34:** 15,9 – 27,8m (52' – 91')
- **INF54:** 15,9 – 30,2m (52' – 99')

Flow Rate:
- **INF34:** 49,2-177,5 LPM (13.0 – 46.9 GPM)
- **INF54:** 50,0-233,9 LPM (13.2 – 61.8 GPM)

Precipitation Rates:
- **INF34:**Minimum: 8,4 mm/hr (0.33"/hr)
- Maximum: 13,9 mm/hr (0.55"/hr)
- **INF54:** Minimum: 8,4 mm/hr (0.33"/hr)
- Maximum: 15,5 mm/hr (0.61"/hr)

Pilot Valve: Selectable at 3,5; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi)

Recommended Operating Pressure Range:
- 4,5-6,9 Bar (65-100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation Type
- Standard Solenoid
- Spike Guard Solenoid
- Nickel-plated Spike Guard Solenoid
- DC Latching Solenoid (DCLS)
- Integrated GDC Module w/DCLS

Trajectory: 25° or 15°

Dimensions

SMART ACCESS® Cover And Compartment Diameter:
- **INF34:** 19cm (7.5")
- **INF54:**19cm (7.5")

Body height:
- **INF34:** 25cm (10")
- **INF54:** 29cm (11.38")

Weight:
- **INF34:**: 1,91kg (4.22 lbs.)
- **INF54:** 2,28kg (5.04 lbs.)

Pop-up height to nozzle: 8,25cm (3.25")

Warranty

Two years; Five years when installed with Toro Swing Joints

Specifying Information—INF34 & INF54

INFX4-XXX-XX				
Body Inlet	*Arc*	*Nozzle*	*Pressure Regulation**	*Activation Type*
INFX	4	XX	X	X
3—1" 5—1½"	4—Full Circle	INF34—31, 32, 33 , 34, 35, 36, 37 INF54—51, 52, 53, 54, 55, 56, 57, 58, 59	6— 4,5 bar (65 psi) 8— 6,5 bar (80 psi) 1— 6,9 bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS
Example: When specifying an INF34 Series Sprinkler with #34 nozzle, pressure regulation at 4,5 bar (65 psi) and Spike Guard you would specify: INF34–346–2				

** All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).*
Note: Not all models available.

INF34 Series Performance Chart—25° (Metric)

Front Nozzle Positions			Nozzle Set 31 (Yellow) 102-0725		Nozzle Set 32 (Blue) 102-7001		Nozzle Set 33 (Brown) 102-0727		Nozzle Set 34 (Orange) 102-7002		Nozzle Set 35 (Green) 102-6908		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261	
			Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Brown 102-6883
Back Nozzle Positions			Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-6944	Yellow 102-6937	Gray 102-6945
Bar	kPa	kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	17,4	49,2	17,7	58,7	19,5	82,9	20,7	92,4	—	—	—	—	—	—
4,5	450	4,59	17,7	55,3	18,3	68,1	20,7	92,4	22,0	106,4	23,2	121,9	—	—	—	—
5,5	550	5,61	18,3	61,3	19,2	77,6	22,0	101,8	23,2	117,7	24,4	134,7	25,3	144,6	25,9	157,1
6,9	690	7,04	18,9	67,8	20,1	88,6	22,9	112,8	24,1	132,1	25,6	148,8	26,8	164,3	27,8	177,5

INF34 Series Performance Chart—15°

Bar	kPa	kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	15,9	48,8	16,2	59,0	18,3	82,1	18,9	96,5	—	—	—	—	—	—
4,5	450	4,59	16,2	54,5	16,5	64,7	18,6	91,6	19,5	106,0	20,4	121,5	—	—	—	—
5,5	550	5,61	17,1	60,6	17,4	71,9	19,8	100,7	21,0	117,3	22,3	134,4	23,2	143,8	23,5	156,3
6,9	690	7,04	17,4	66,2	18,0	77,6	20,4	111,7	21,7	128,3	22,9	145,3	24,4	163,1	24,7	177,1
Stator			102-6929 Blue								102-1940 White					
Conversions			INF34-3134								INF34-3537					

INF34 Series Performance Chart—25° (U.S.)

Front Nozzle Positions	Nozzle Set 31 (Yellow) 102-0725		Nozzle Set 32 (Blue) 102-7001		Nozzle Set 33 (Brown) 102-0727		Nozzle Set 34 (Orange) 102-7002		Nozzle Set 35 (Green) 102-6908		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261	
	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Brown 102-6883
Back Nozzle Positions	Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-6944	Yellow 102-6937	Gray 102-6945
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	57	13.0	58	15.5	64	21.9	68	24.4	—	—	—	—	—	—
65	58	14.6	60	18.0	68	24.4	72	28.1	76	32.2	—	—	—	—
80	60	16.2	63	20.5	72	26.9	76	31.1	80	35.6	83	38.2	85	41.5
100	62	17.9	66	23.4	75	29.8	79	34.9	84	39.3	88	43.4	91	46.9

INF34 Series Performance Chart—15°

psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	52	12.9	53	15.6	60	21.7	62	25.5	—	—	—	—	—	—
65	53	14.4	54	17.1	61	24.2	64	28.0	67	32.1	—	—	—	—
80	56	16.0	57	19.0	65	26.6	69	31.0	73	35.5	76	38.0	77	41.3
100	57	17.5	59	20.5	67	29.5	71	33.9	75	38.4	80	43.1	81	46.8
Stator	102-6929 Blue								102-1940 White					
Conversions	INF34-3134								INF34-3537					

Not recommended at these pressures. Radius shown in feet.
Toro recommends the use of a 1¼" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius of throw per ASAE standard S398.1.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).

INF34 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 bar	31	1,8 @ 15,6	4,0 @ 16,5
	32	1,8 @ 15,6	3,4 @ 19,5
	33	2,1 @ 18,0	4,0 @ 20,7
	34	2,4 @ 19,2	4,6 @ 22,6
	35	2,7 @ 20,1	4,6 @ 23,2
5,5 bar	36	2,4 @ 22,9	5,5 @ 25,3
	37	2,7 @ 22,6	5,8 @ 25,0

INF34 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	31	6' @ 51'	13' @ 54'
	32	6' @ 51'	11' @ 64'
	33	7' @ 59'	13' @ 68'
	34	8' @ 63'	15' @ 74'
	35	9' @ 66'	15' @ 76'
80 PSI	36	8' @ 75'	18' @ 83'
	37	9' @ 74'	19' @ 82'

INF54 Series Performance Chart—25° (Metric)

Front Nozzle Positions			Nozzle Set 51 (Yellow) 102-0725		Nozzle Set 52 (Blue) 102-7001		Nozzle Set 53 (Brown) 102-0727		Nozzle Set 54 (Orange) 102-7002		Nozzle Set 55 (Green) 102-6908		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260		Nozzle Set 59 (Beige) 102-4259	
			Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335	
Back Nozzle Positions			Yellow 102-6937		Blue 102-2925		Yellow 102-6937		Orange 102-2926		Yellow 102-6937		Red 102-2928		Yellow 102-6937		Beige 102-2929		Yellow 102-6937	
Bar	**kPa**	**kg/cm²**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**
3,4	340	3,47	17,7	50,0	18,0	59,4	19,5	83,3	21,4	99,2	-	-	-	-	-	-	-	-	-	-
4,5	450	4,59	18,3	56,0	18,6	66,2	20,7	93,9	22,6	110,9	24,1	129,4	-	-	-	-	-	-	-	-
5,5	550	5,61	18,6	62,1	19,5	75,7	22,0	104,5	23,8	123,4	25,3	143,8	25,9	154,0	26,5	169,9	27,8	190,0	29,3	210,4
6,9	690	7,04	19,2	68,5	20,4	89,3	22,9	115,1	24,7	138,9	26,5	160,9	27,5	173,4	28,4	190,0	29,0	209,7	30,2	233,9

INF54 Series Performance Chart—15°

Bar	**kPa**	**kg/cm2**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**	**Radius**	**LPM**
3,4	340	3,47	15,9	50,0	16,2	59,8	18,6	83,3	19,8	98,4	-	-	-	-	-	-	-	-	-	-
4,5	450	4,59	16,2	56,0	16,5	65,9	19,2	93,9	20,4	110,5	21,0	129,1	-	-	-	-	-	-	-	-
5,5	550	5,61	17,1	62,1	17,7	73,4	20,7	104,5	22,0	123,0	22,9	143,1	24,1	152,9	24,7	168,8	25,9	188,9	26,5	209,3
6,9	690	7,04	17,7	68,5	18,3	79,9	21,7	115,1	22,9	137,8	24,1	160,1	25,6	172,2	26,5	188,9	27,1	208,6	28,7	232,8
Stator			102-6929 Blue								102-1940 White								102-1941 White	
Conversions			INF54-5154								INF54-5558								INF54-59	

INF54 Series Performance Chart—25° (U.S.)

Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-0725		Nozzle Set 52 (Blue) 102-7001		Nozzle Set 53 (Brown) 102-0727		Nozzle Set 54 (Orange) 102-7002		Nozzle Set 55 (Green) 102-6908		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260		Nozzle Set 59 (Beige) 102-4259	
	Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335	
Back Nozzle Positions	Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-6944	Yellow 102-6937	Gray 102-6945	Yellow 102-6937	Gray 102-6945	Yellow 102-6937	Gray 102-6945
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	58	13.2	59	15.7	64	22.0	70	26.2	—	—	—	—	—	—	—	—	—	—
65	60	14.8	61	17.5	68	24.8	74	29.3	79	34.2	—	—	—	—	—	—	—	—
80	61	16.4	64	20.0	72	27.6	78	32.6	83	38.0	85	40.7	87	44.9	91	50.2	96	55.6
100	63	18.1	67	23.6	75	30.4	81	36.7	87	42.5	90	45.8	93	50.2	95	55.4	99	61.8

INF54 Series Performance Chart—15°

psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	52	13.2	53	15.8	61	22.0	65	26.0	—	—	—	—	—	—	—	—	—	—
65	53	14.8	54	17.4	63	24.8	67	29.2	69	34.1	—	—	—	—	—	—	—	—
80	56	16.4	58	19.4	68	27.6	72	32.5	75	37.8	79	40.4	81	44.6	85	49.9	87	55.3
100	58	18.1	60	21.1	71	30.4	75	36.4	79	42.3	84	45.5	87	49.9	89	55.1	94	61.5
Stator	102-6929 Blue								102-1940 White								102-1941 White	
Conversions	INF54-5154								INF54-5558								INF54-59	

Not recommended at these pressures. Radius shown in feet.
Toro recommends the use of a 1¼" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius of throw per ASAE standard S398.1.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).

INF54 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 Bar	51	1,8 @ 15,6	4,0 @ 16,5
	52	1,8 @ 15,6	3,4 @ 19,5
	53	2,1 @ 18,0	4,0 @ 20,7
	54	2,4 @ 19,2	4,6 @ 22,6
	55	2,7 @ 20,1	4,6 @ 23,2
5,5 Bar	56	2,4 @ 22,9	5,5 @ 25,3
	57	2,7 @ 22,6	5,8 @ 25,0
	58	3,0 @ 25,0	5,5 @ 26,5
	59	3,4 @ 24,7	6,4 @ 27,1

INF54 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	51	6' @ 51'	13' @ 54'
	52	6' @ 51'	11' @ 64'
	53	7' @ 59'	13' @ 68'
	54	8' @ 63'	15' @ 74'
	55	9' @ 66'	15' @ 76'
80 PSI	56	8' @ 75'	18' @ 83'
	57	9' @ 74'	19' @ 82'
	58	10' @ 82'	18' @ 87'
	59	11' @ 81'	21' @ 91'

FLEX800™ SERIES GOLF ROTORS FLX35-6/FLX55-6

NEW

Learn more at **Toro.com**

Features & Benefits | Specifications | Performance Data

FLEX800™ 35-6/55-6 Series

With the industry's largest selection of high performance nozzles and TruJectory™ adjustment the NEW FLEX800™ 35-6/55-6 Series allows you to put water precisely where you want it for maximum distribution uniformity. The part/full circle drive allows you to simply and economically adjust the area of coverage to match your seasonal watering needs or meet water rationing mandates in seconds with no disassembly or additional parts required. Finally, with TruJectory™ you have 24 positions from 7 to 30° in 1° increments to put water where you want it.

TruJectory™

Features & Benefits

1. **Industry's Largest Nozzle Selection**
Nozzles from 12,8m – 30,5m (42' to 100') radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All nozzles threaded in from the front.

2. **24 TruJectory™ Positions**
From 7° - 30° in 1° increments put water where you want it. Adjust from the top of the sprinkler in seconds, wet or dry. This flexibility lets you tackle every obstacle on the course; wind, trees, bunkers, mounds and more.

Weight:
FLX35-6: 1,35kg (2.98 lbs.)

3. **Ratcheting Riser**
Align part circle quickly and easily or adjust watering locations to suit seasonal needs.

4. **True Part- and Full-Circle in One (40° - 330° part circle)**
These sprinklers can be full circle today and part circle tomorrow allowing you to simply and economically adjust the area of coverage to match your seasonal needs or meet water rationing mandates.

Weight:
FLX55-6: 1,68kg (3.70 lbs.)

FLEX800™ SERIES GOLF ROTORS FLX35-6/FLX55-6

Conversion Upgrades

FLX35-6 Conversion Upgrades

Models	Description
• FLX35-6-3134	FLX35-6 w/31–34 Nozzles (33 Nozzle Installed)
• FLX35-6-3537	FLX35-6 w/35–37 Nozzles (35 Nozzle Installed)

FLX55-6 Conversion Upgrades—(Ribbed Body)

Models	Description
• FLX55-6-5154	FLX55-6 w/51–54 Nozzles (53 Nozzle Installed)
• FLX55-6-5558	FLX55-6 w/55–58 Nozzles (55 Nozzle Installed)
• FLX55-6-59	FLX55-6 w/59 Nozzle

FLX55-6 Conversion Upgrades—(Ribless Body)

Models	Description
• FLX55-6-5154R	FLX55-6 w/51–54 Nozzles (53 Nozzle Installed)
• FLX55-6-5558R	FLX55-6 w/55–58 Nozzles (55 Nozzle Installed)
• FLX55-6-59R	FLX55-6 w/59 Nozzle

Specifications

Features

- Trajectory: 24 positions from 7° – 30° in 1° increments
- Part/Full circle sprinklers
- Pop-up height to nozzle: 8,25cm (3.25")

Operating Specifications

Inlet:
- FLX35-6: 25mm (1") ACME
- FLX55-6: 40mm (1.5") ACME

Radius:
- FLX35-6: 12,8 – 28,0m (42' – 92')
- FLX55-6: 15,9 – 30,5m (52' – 100')

Flow Rate:
- FLX35-6: 26,9-171,5 LPM (7.1 – 45.3 GPM)
- FLX55-6: 52,6-231,3 LPM (13.9 – 61.1 GPM)

Precipitation Rates:
- FLX35-6: Minimum: 9mm/hr (0.37"/hr); Maximum: 13,5mm/hr (0.53"/hr)
- FLX55-6: Minimum: 11mm/hr (0.43"/hr); Maximum: 15mm/hr (0.60"/hr)

Pilot Valve: Selectable at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi)

Recommended Operating Pressure Range:
- 4,5-6,9 Bar (65-100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation types – Electric Valve-in-Head:

- Standard Solenoid:
  - 24 VAC, 50/60 Hz
  - Inrush: 0.30 A
  - Holding 0.20 A
- Spike Guard Solenoid:
  - 24 VAC, 50/60 Hz
  - Inrush: 0.12 A
  - Holding 0.10 A
- Nickel-Plated Spike Guard Solenoid:
  - 24 VAC, 50/60 Hz
  - Inrush: 0.12 A
  - Holding 0.10 A
- DC Latching Solenoid (DCLS):
  - 12 VDC pulse or latching pulse
- Integrated GDC Module w/DCLS:
  - 12 VDC pulse or latching pulse

Nozzle Selection

- FLX35-6 has eight nozzle variation (30, 31, 32, 33, 34, 35, 36 & 37)
- FLX55-6 has nine nozzle variations (51, 52, 53, 54, 55, 56, 57, 58 & 59)
- Four in-line nozzles, rotating stream pattern
- One back nozzle position

Dimensions

- Body diameter:
  - FLX35-6: 16,5cm (6.5")
  - FLX55-6: 19cm (7.5")
- Body height:
  - FLX35-6: 25cm (10")
  - FLX55-6: 29cm (11.38")
- Weight:
  - FLX35-6: 1,35kg (2.98 lbs.)
  - FLX55-6: 1,68kg (3.70 lbs.)

Warranty

- Two years; Five years when installed with Toro Swing Joints

Specifying Information—FLX35-6 & FLX55-6

FLXX5-XXX-X6

Body Inlet	*Arc*	*Nozzle*	*Pressure Regulation**	*Activation Type*	*Trajectory*
FLXX	X	XX	X	X	**6**
3— 25mm (1") 5— 40mm (1.5")	5—Part-circle and Full-circle In One	FLX35 - 30 31 32 33 34 35 36 37 FLX55 - 51 52 53 54 55 56 57 58 59	6— 4,5 bar (65 psi) 8— 6,5 bar (80 psi) 1— 6,9 bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS	6—24-position TruJectory

Example: When specifying an FLX35-6 Series Sprinkler with Spike Guard™ Solenoid, #34 nozzle, an electric valve and pressure regulation at **4,5 bar (65 psi)** you would specify: FLX35–346-26

** Electric models only. All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).*
Note: Not all models available. Nickel-plated, corrosion-resistant models are available upon request.

FLX35-6/FLX55-6 Trajectory Performance—(Metric)

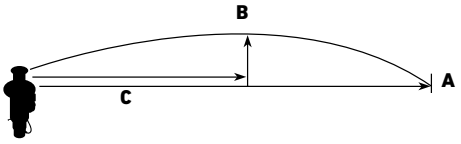
Nozzle/Bar/LPM	#31/51 Nozzle @ 4,5 Bar												#32/52 Nozzle @ 4,5 Bar											
Trajectory	7°		10°		15°		20°		25°		30°		7°		10°		15°		20°		25°		30°	
"A" Radius	14,0		14,0		15,2	15,5	16,2		16,5		15,2		14,0	14,9	14,9	15,2	15,5		16,8		19,2	19,5	16,5	19,8
"B" Spray Height	1,2		1,2		1,5	1,8	2,4	3,0	3,4	4,0	4,0	4,6	0,9	1,2	1,2		1,8		2,7		3,7	3,4	4,6	4,0
"C" Distance from Head	7,6	7,9	7,6	8,2	7,9	9,8	10,1	11,6	10,1	12,2	10,1	12,4	6,1	6,7	7,3	7,9	8,5	9,4	10,4	10,7	10,4		10,4	9,1

Nozzle/Bar/LPM	#33/53 Nozzle @ 4,5 Bar												#34/54 Nozzle @ 4,5 Bar											
Trajectory	7°		10°		15°		20°		25°		30°		7°		10°		15°		20°		25°		30°	
"A" Radius	16,5		17,1		18,0		18,9		20,1	20,7	18,6		17,7		18,3		19,2		20,4		22,6		21,3	
"B" Spray Height	1,2	1,5	1,5	1,8	2,1		2,7		4,0		4,6		1,2	1,5	1,2	1,8	1,8	2,4	3,4	3,0	4,3		5,2	
"C" Distance from Head	7,0	9,1	8,5	10,1	9,8		10,4	10,7	10,7	11,3	10,7	11,3	7,3	9,4	7,9	10,4	10,7	12,2	11,9	12,5	11,9		11,9	12,8

Nozzle/Bar/LPM	#35/55 Nozzle @ 4,5 Bar												#36/56 Nozzle @ 5,5 Bar											
Trajectory	7°		10°		15°		20°		25°		30°		7°		10°		15°		20°		25°		30°	
"A" Radius	18,0		18,6	18,9	19,5	20,1	21,3		23,2		22,6	23,5	19,5	21,9	20,7	22,2	23,2	22,9	24,4	25,0	25,6	25,9	25,0	
"B" Spray Height	1,2	1,8	1,5	1,8	2,1	2,7	3,4		4,6		5,2		1,5		2,1		2,7		4,3		5,2		6,7	
"C" Distance from Head	9,1	10,4	9,8	11,0	11,0	13,1	13,1	13,7	13,1	13,7	13,1	13,7	7,6		11,6		12,2		13,7		14,9		13,7	

Nozzle/Bar/LPM	#37/57 Nozzle @ 5,5 Bar												#58 Nozzle @ 5,5 Bar					
Trajectory	7°		10°		15°		20°		25°		30°		7°	10°	15°	20°	25°	30°
"A" Radius	19,8	21,9	21,0	22,6	23,8	23,5	25,0	25,3	26,2	27,1	25,6	25,9	22,9	23,5	25,3	26,5	28,0	26,8
"B" Spray Height	1,5		2,1		2,7		4,3		5,5		6,7		1,8	2,1	3,0	4,6	5,5	6,7
"C" Distance from Head	9,1		11,9		12,5		14,0		15,2		14,0		11,6	12,2	13,1	14,3	15,8	14,6

Nozzle/Bar/LPM	#59 Nozzle @ 5,5 Bar					
Trajectory	7°	10°	15°	20°	25°	30°
"A" Radius	23,5	23,8	25,6	27,1	29,3	28,0
"B" Spray Height	2,1	2,4	3,4	4,9	6,4	7,6
"C" Distance from Head	12,8	13,4	13,7	14,3	16,2	14,9



Information is for reference only, Actual results may vary,

FLX35-6 Series Performance Chart—(Metric)

Base Pressure			Nozzle Set 30 (White) 102-2208		Nozzle Set 31 (Yellow) 102-4587		Nozzle Set 32 (Blue) 102-4588		Nozzle Set 33 (Brown) 102-4589		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-0729		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261	
			Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Red 102-2928	Gray 102-2910	Orange 102-2926	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Orange 102-2926	Gray 102-2910
Bar	kPa	kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	12,8	26,9	15,9	51,9	18,6	64,7	19,5	76,5	21,0	103,7	—	—	—	—	—	—
4,5	450	4,59	13,7	32,9	16,5	58,7	19,2	77,6	20,1	86,7	22,6	113,6	23,2	122,6	—	—	—	—
5,5	550	5,61	14,0	36,3	17,4	64,3	20,4	85,5	21,4	95,8	23,5	125,7	24,1	135,5	25,6	141,9	26,2	154,4
6,9	690	7,04	14,6	42,4	18,0	71,5	22,0	95,4	22,6	106,7	24,4	140,0	25,6	151,0	26,8	160,9	28,1	171,5
Stator			102-6929 Blue		102-1939 Yellow								102-1940 White					
Conversions					FLX35-6-3134								FLX35-6-3537					

FLX55-6 Series Performance Chart—(Metric)

Base Pressure			Nozzle Set 51 (Yellow) 102-4587		Nozzle Set 52 (Blue) 102-4588		Nozzle Set 53 (Brown) 102-4589		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-0729		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260		Nozzle Set 59 (Beige) 102-4259	
			Blue 102-2925	Gray 102-2910	Red 102-2928	Gray 102-2910	Orange 102-2926	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910
Bar	kPa	kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	15,9	52,6	18,9	65,9	20,1	78,3	21,0	108,3	—	—	—	—	—	—	—	—	—	—
4,5	450	4,59	16,5	59,4	19,5	78,3	20,7	88,6	22,6	113,1	23,2	127,9	—	—	—	—	—	—	—	—
5,5	550	5,61	17,4	65,1	20,7	86,7	22,0	97,7	23,5	130,2	24,1	140,8	25,9	149,1	27,1	165,0	28,1	179,8	29,3	215,7
6,9	690	7,04	18,0	72,3	22,3	96,5	23,2	108,6	24,4	144,6	25,6	156,3	27,1	165,4	28,7	183,6	29,0	194,9	30,5	231,3
Stator			102-1939 Yellow								102-1940 White								102-1941	
Conversions			FLX55-6-5154								FLX55-6-5558								FLX55-6-59	

Not recommended at these pressures. Radius shown in meters.
Toro recommends the use of a 30mm swing joint at flows over 95-LPM. Sprinkler radius of throw per ASAE standard S398.1. Actual site conditions must be considered when selecting the appropriate nozzle.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar.

FLX35-6/FLX55-6 Trajectory Performance—(U.S.)

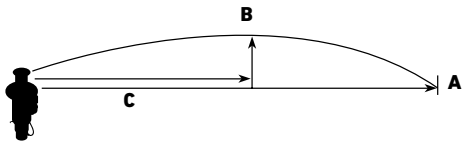
Nozzle/PSI/GPM	#31/51 Nozzle @ 65 psi						#32/52 Nozzle @ 65 psi					
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	46'	46'	50'/51'	53'	54'	50'	46'/49'	49'/50'	51'	55'	63'/64'	54'/65'
"B" Spray Height	4'	4'	5'/6'	8'/10'	11'/13'	13'/15'	3'/4'	4'	6'	9'	12'/11'	15'/13'
"C" Distance from Head	25'/26'	25'/27'	26'/32'	33'/38'	33'/40'	33'/41'	20'/22'	24'/26'	28'/31'	34'/35'	34'	34'/30'

Nozzle/PSI/GPM	#33/53 Nozzle @ 65 psi						#34/54 Nozzle @ 65 psi					
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	54'	56'	59'	62'	66'/68'	61'	58'	60'	63'	67'	74'	70'
"B" Spray Height	4'/5'	5'/6'	7'	9'	13'	15'	4'/5'	4'/6'	6'/8'	11'/10'	14'	17'
"C" Distance from Head	23'/30'	28'/33'	32'	34'/35'	35'/37'	35'/37'	24'/31'	26'/34'	35'/40'	39'/41'	39'	39'/42'

Nozzle/PSI/GPM	#35/55 Nozzle @ 65 psi						#36/56 Nozzle @ 80 psi					
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	59'	61'/62'	64'/66'	70'	76'	74'/77'	64'/72'	68'/73'	76'/75'	80'/82'	84'/85'	82'
"B" Spray Height	4'/6'	5'/6'	7'/9'	11'	15'	17'	5'	7'	9'	14'	17'	22'
"C" Distance from Head	30'/34'	32'/36'	36'/43'	43'/45'	43'/45'	43'/45'	25'	38'	40'	45'	49'	45'

Nozzle/PSI/GPM	#37/57 Nozzle @ 80 psi						#58 Nozzle @ 80 psi					
Trajectory	7°	10°	15°	20°	25°	30°	7°	10°	15°	20°	25°	30°
"A" Radius	65'/72'	69'/74'	78'/77'	82'/83'	86'/89'	84'/85'	75'	77'	83'	87'	92'	88'
"B" Spray Height	5'	7'	9'	14'	18'	22'	6'	7'	10'	15'	18'	22'
"C" Distance from Head	30'	39'	41'	46'	50'	46'	38'	40'	43'	47'	52'	48'

Nozzle/PSI/GPM	#59 Nozzle @ 80 psi					
Trajectory	7°	10°	15°	20°	25°	30°
"A" Radius	77'	78'	84'	89'	96'	92'
"B" Spray Height	7'	8'	11'	16'	21'	25'
"C" Distance from Head	42'	44'	45'	47'	53'	49'



Information is for reference only. Actual results may vary.

FLX35-6 Series Performance Chart—(U.S.)

Base Pressure	Nozzle Set 30 (White) 102-2208		Nozzle Set 31 (Yellow) 102-4587		Nozzle Set 32 (Blue) 102-4588		Nozzle Set 33 (Brown) 102-4589		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-0729		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261	
	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Red 102-2928	Gray 102-2910	Orange 102-2926	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Orange 102-2926	Gray 102-2910
psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	42	7.1	52	13.7	61	17.1	64	20.2	69	27.4	—	—	—	—	—	—
65	45	8.7	54	15.5	63	20.5	66	22.9	74	30.0	76	32.4	—	—	—	—
80	46	9.6	57	17.0	67	22.6	70	25.3	77	33.2	79	35.8	84	37.5	86	40.8
100	48	11.2	59	18.9	72	25.2	74	28.2	80	37.0	84	39.9	88	42.5	92	45.3
Stator	102-6929 Blue		102-1939 Yellow								102-1940 White					
Conversions			FLX35-6-3134								FLX35-6-3537					

FLX55-6 Series Performance Chart—(U.S.)

Base Pressure	Nozzle Set 51 (Yellow) 102-4587		Nozzle Set 52 (Blue) 102-4588		Nozzle Set 53 (Brown) 102-4589		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-0729		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260		Nozzle Set 59 (Beige) 102-4259	
	Blue 102-2925	Gray 102-2910	Red 102-2928	Gray 102-2910	Orange 102-2926	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910
psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	52	13.9	62	17.4	66	20.7	69	28.6	—	—	—	—	—	—	—	—	—	—
65	54	15.7	64	20.8	68	23.4	74	31.2	76	33.8	—	—	—	—	—	—	—	—
80	57	17.2	68	22.9	72	25.8	77	34.4	79	37.2	85	39.4	89	43.6	92	47.5	96	57.0
100	59	19.1	73	25.5	76	28.7	80	38.2	84	41.3	89	43.7	94	48.5	95	51.1	100	61.1
Stator	102-1939 Yellow								102-1940 White								102-1941	
Conversions	FLX55-6-5154								FLX55-6-5558								FLX55-6-59	

— *Not recommended at these pressures. Radius shown in feet.*

Toro recommends the use of a 1.25" swing joint at flows over 25-GPM (95-LPM). Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1. Actual site conditions must be considered when selecting the appropriate nozzle.

All sprinklers are equipped with the selectable pilot valve that allows settings at 50, 65, 80 and 100 psi.

FLEX800™ SERIES GOLF ROTORS FLX35/FLX55

NEW

Learn more at **Toro.com**

Features & Benefits | Specifications | Performance Data

The New FLEX800 35/55 Series features a dual trajectory main nozzle that provides exceptional nozzle performance at the 25° standard angle position and great performance in windy applications at the 15° low angle position. And the part/full circle drive allows you to adjust the area of coverage to match your seasonal watering needs or meet water rationing mandates in seconds with no additional parts required.

Part/Full Circle Drive

Features & Benefits

1 **Dual Trajectory 25° or 15°**
The 25° setting provides maximum distance of throw and the 15° setting provides improved wind performance, radius reduction and obstacle avoidance.

2 **Ratcheting riser**
Toro exclusive, simply pull up the riser and ratchet it to the precise position you want to water.
Radius Reduction Screw
Allows for fine tuning the radius to exactly the distance you need. In combination with main nozzle sizing and trajectory adjustment the radius reduction screw (363-4839) can effectively reduce the sprinkler throw down to 9,1m (30').

3 **Industry's Largest Nozzle Selection**
Nozzles from 13,1m - 28,0m (43' to 92') radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All nozzles threaded in from front.

4 **True Part and Full-Circle in One – (40° - 330° part circle)**
These sprinklers can be full circle today and part circle tomorrow allowing you to adjust the area of coverage to match your seasonal needs or meet water rationing mandates.

Weight:
FLX35: 1,62kg (3.57 lbs.)

Weight:
FLX55: 1,93kg (4.26 lbs.)

FLEX800™ SERIES GOLF ROTORS FLX35/FLX55

FLX35 Conversion Upgrades

Models	Description
• FLX35-3134	FLX35 w/31–34 Nozzles (#3 Nozzle)
• FLX35-3537	FLX35 w/35–37 Nozzles (#5 Nozzle)

FLX55 Conversion Upgrades (Ribbed Body)

Models	Description
• FLX55-5154	FLX55 w/51–54 Nozzles (#3 Nozzle)
• FLX55-5558	FLX55 w/55–58 Nozzles (#5 Nozzle)
• FLX55-59	FLX55 w/59 Nozzle

FLX55 Conversion Upgrades (Ribless Body)

Models	Description
• FLX55-5154R	FLX55 w/51–54 Nozzles (#3 Nozzle)
• FLX55-5558R	FLX55 w/55–58 Nozzles (#5 Nozzle)
• FLX55-59R	FLX55 w/59 Nozzle

Features
- Dual Trajectory adjustment on main nozzle - 25° or 15°
- Part/Full circle sprinklers
- Radius reduction screw 363-4839 for fine tuning
- Ratcheting riser
- Nozzle base clutching
- Pop-up height to nozzle: 8,25cm (3.25")

Operating Specifications

Inlet:
- FLX35: 25mm (1") ACME
- FLX55: 40mm (1.5") ACME

Radius:
- FLX35: 13,1 – 25,3m (43' – 83')
- FLX55: 16,7 – 28,0m (55' – 92')

Flow Rate:
- FLX35: 31,0 – 179,0 LPM (8.2 – 47.8 GPM)
- FLX55: 53,0 – 232,0 LPM (14.1 – 61.3 GPM)

Precipitation Rates:
- FLX35: Minimum: 10,4 mm/hr (0.41"/hr); Maximum: 11,4 mm/hr (0.45"/hr)
- FLX55: Minimum: 11,7 mm/hr (0.46"/hr); Maximum: 14,7 mm/hr (0.58"/hr)

Pilot Valve:
- Selectable at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80, 100 psi)

Recommended Operating Pressure Range:
- 4,5-6,9 Bar (65-100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation types – Electric Valve-in-Head:
- Standard Solenoid:
  - 24 VAC, 50/60 Hz
  - Inrush: 0.30 A
  - Holding 0.20 A
- Spike Guard Solenoid:
  - 24 VAC, 50/60 Hz
  - Inrush: 0.12 A
  - Holding 0.10 A
- Nickel-Plated Spike Guard Solenoid:
  - 24 VAC, 50/60 Hz
  - Inrush: 0.12 A
  - Holding 0.10 A
- DC Latching Solenoid (DCLS):
  - 12 VDC pulse or latching pulse
- Integrated GDC Module w/DCLS:
  - 12 VDC pulse or latching pulse

Nozzle Selection
- FLX35 has eight nozzle variations (30, 31, 32, 33, 34, 35, 36 & 37)
- FLX55 has nine nozzle variations (51, 52, 53, 54, 55, 56, 57, 58 & 59)
- Three in-line nozzles, rotating stream pattern
- Two back nozzle positions

Dimensions
- Body diameter:
  - FLX35-6: 16,5cm (6.5")
  - FLX55-6: 19cm (7.5")
- Body height:
  - FLX35: 25cm (10")
  - FLX55: 29cm (11.38")
- Weight:
  - FLX35-6: 1,31kg (2.89 lbs.)
  - FLX55-6: 1,62kg (3.57 lbs.)
- Weight–Integrated GDC
  - FLX35: 1,62kg (3.57 lbs.)
  - FLX55: 1,93kg (4.26 lbs.)

Warranty
- Two years; Five years when installed with Toro Swing Joints

Specifying Information—FLX35 & FLX55

FLXX5-XXX-X

Body Inlet	*Arc*	*Nozzle*	*Pressure Regulation**	*Activation Type*
FLXX	**5**	XX	X	X
3—25mm (1") 5—40mm (1½")	5—Part-circle and Full-circle In One	FLX35—30, 31, 32, 33 , 34, 35, 36, 37 FLX55—51, 52, 53, 54, 55, 56, 57, 58, 59	6— 4,5 bar (65 psi) 8— 6,5 bar (80 psi) 1— 6,9 bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS

Example: When specifying an FLX35 Series Sprinkler with #34 nozzle, pressure regulation at 4,5 bar (65 psi) and Spike Guard you would specify: FLX35–346–2

** All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).*
Note: Not all models available. Nickel-plated, corrosion-resistant models are available upon request.

FLX35 Performance Data—25° – (Metric)

Front Nozzle Positions			Nozzle Set 30 (White Plug) 102-2208		Nozzle Set 31 (Yellow) 102-6906		Nozzle Set 32 (Blue) 102-0726		Nozzle Set 33 (Brown) 102-6907		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-6955		Nozzle Set 36 (Gray) 102-6935		Nozzle Set 37 (Black) 102-6936	
			Yellow	Biege	Yellow	Brown	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green
			102-5670	102-6942	102-5670	102-5671	102-5670	102-6884	102-5670	102-6884	102-5670	102-6884	102-5670	102-6885	102-6531	102-6885	102-6531	102-6885
Back Nozzle Positions			Red Plug 102-4335															
Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	13,1	31,0	16,2	52,2	17,1	69,3	18,6	82,1	—	—	—	—	—	—	—	—
4,5	450	4,59	13,7	37,9	16,2	58,7	18,0	77,6	19,5	92,4	20,7	106,7	22,0	129,1	—	—	—	—
5,5	550	5,61	14,0	43,5	17,4	65,5	18,9	85,9	20,4	102,6	21,7	117,7	22,9	143,1	23,8	152,5	24,4	166,5
6,9	690	7,04	14,3	50,7	18,0	72,3	19,8	94,2	21,4	112,8	22,6	129,1	24,1	154,8	24,7	165,8	25,3	179,0
FLX35 Series Performance Chart—15°																		
Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	13,1	31,0	15,9	51,5	17,7	68,5	18,6	81,4	—	—	—	—	—	—	—	—
4,5	450	4,59	13,7	37,9	16,5	57,9	18,3	76,8	19,5	91,6	19,8	103,3	21,0	125,3	—	—	—	—
5,5	550	5,61	14,0	43,5	17,7	65,1	19,5	85,5	21,0	101,4	21,0	114,3	22,9	139,3	23,2	150,3	23,2	162,4
6,9	690	7,04	14,3	50,7	18,3	71,9	20,1	93,5	21,7	111,7	22,0	124,5	23,8	149,5	25,0	161,2	25,0	174,5
Stator			102-6929 Blue		102-1939 Yellow								102-1940 White					
Conversions			FLX35-3134										FLX35-3537					

FLX55 Performance Data—25° – (Metric)

Front Nozzle Positions			Nozzle Set 51 (Yellow) 102-6906		Nozzle Set 52 (Blue) 102-0726		Nozzle Set 53 (Brown) 102-6907		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-6955		Nozzle Set 56 (Gray) 102-6935		Nozzle Set 57 (Black) 102-6936		Nozzle Set 58 (Red) 102-6909		Nozzle Set 59 (Beige) 102-4259	
			Yellow	Brown	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green
			102-5670	102-5671	102-5670	102-6884	102-5670	102-6884	102-5670	102-6884	102-5670	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885	102-6531	102-6885
Back Nozzle Positions			Red Plug 102-4335																	
Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	16,7	53,4	17,3	70,0	18,9	84,4	20,1	97,6	—	—	—	—	—	—	—	—	—	—
4,5	450	4,59	17,4	59,8	18,2	79,1	19,8	95,0	21,0	108,6	22,3	135,8	—	—	—	—	—	—	—	—
5,5	550	5,61	18,0	66,2	18,5	87,4	20,7	105,2	21,9	119,9	23,1	150,3	24,4	163,2	25,2	182,5	25,9	189,3	27,1	217,6
6,9	690	7,04	18,6	73	19,2	95,7	21,7	114,7	22,8	130,6	24,4	164,6	25,2	185,5	26,8	194,9	27,4	204,0	28,0	232,0
FLX55 Series Performance Chart—15°																				
Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	16,7	53,0	17,9	62,5	18,9	84,0	19,2	96,9	—	—	—	—	—	—	—	—	—	—
4,5	450	4,59	17,1	59,0	18,8	78,3	19,8	94,6	20,1	107,9	22,8	133,6	—	—	—	—	—	—	—	—
5,5	550	5,61	18,0	65,9	20,1	87,1	21,0	104,8	21,4	119,2	23,1	147,6	23,7	160,5	24,0	177,5	24,0	187,4	25,0	216,5
6,9	690	7,04	18,2	72,7	20,7	95,0	21,7	114,3	22,0	129,8	24,4	158,6	24,6	184,3	25,3	192,2	25,3	202,1	25,9	230,1
Stator			102-1939 Yellow								102-1940 White								102-1941 White	
Conversions			FLX55-5154								FLX55-5558								FLX55-59	

Not recommended at these pressures. Radius shown in meters.
Toro recommends the use of a 30mm swing joint at flows over 95-LPM. Sprinkler radius of throw per ASAE standard S398.1.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar.

FLX35 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 bar	31	1,8m @ 15,5m	4m @ 16,4m
	32	1,8m @ 15,5m	3,4m @ 19,5m
	33	2,1m @ 18m	4m @ 20,7m
	34	2,4m @ 19m	4,6m @ 22,6m
	35	2,7m @ 20m	4,6m @ 23m
5,5 bar	36	2,4m @ 22,9m	5,5m @ 25,3m
	37	2,7m @ 22,5m	5,8m @ 25m

FLX55 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 bar	51	1,8m @ 15,5m	4m @ 16,4m
	52	1,8m @ 15,5m	3,4m @ 19,5m
	53	2,1m @ 18m	4m @ 20,7m
	54	2,4m @ 19m	4,6m @ 22,6m
	55	2,7m @ 20m	4,6m @ 23m
5,5 bar	56	2,4m @ 22,9m	5,5m @ 25,3m
	57	2,7m @ 22,5m	5,8m @ 25m
	58	3m @ 25m	5,5m @ 26,5m
	59	3,4m @ 24,6m	6,4m @ 27,7m

FLX35 Performance Data—25° – (U.S.)

Front Nozzle Positions	Nozzle Set 30 (White Plug) 102-2208		Nozzle Set 31 (Yellow) 102-6906		Nozzle Set 32 (Blue) 102-0726		Nozzle Set 33 (Brown) 102-6907		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-6955		Nozzle Set 36 (Gray) 102-6935		Nozzle Set 37 (Black) 102-6936	
	Yellow 102-5670	Biege 102-6942	Yellow 102-5670	Brown 102-5671	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885
Back Nozzle Positions	Red Plug 102-4335															
PSI	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**
50	43	8.2	53	13.8	56	18.3	61	21.7	65	25.3	—	—	—	—	—	—
65	45	10.0	53	15.5	59	20.5	64	24.4	68	28.2	72	34.1	—	—	—	—
80	46	11.5	57	17.3	62	22.7	67	27.1	71	31.1	75	37.8	78	40.3	80	44.0
100	47	13.4	59	19.1	65	24.9	70	29.8	74	34.1	79	40.9	81	43.8	83	47.3

FLX35 Series Performance Chart—15°

PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	43	8.2	52	13.6	58	18.1	61	21.5	62	25.6	—	—	—	—	—	—
65	45	10.0	54	15.3	60	20.3	64	24.2	65	27.3	69	33.1	—	—	—	—
80	46	11.5	58	17.2	64	22.6	69	26.8	69	30.2	75	36.8	76	39.7	76	42.9
100	47	13.4	60	19.0	66	24.7	71	29.5	72	32.9	78	39.5	82	42.6	82	46.1
Stator	102-6929 Blue		102-1939 Yellow								102-1940 White					
Conversions	FLX35-3134										FLX35-3537					

FLX55 Performance Data—25° – (U.S.)

Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-6906		Nozzle Set 52 (Blue) 102-0726		Nozzle Set 53 (Brown) 102-6907		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-6955		Nozzle Set 56 (Gray) 102-6935		Nozzle Set 57 (Black) 102-6936		Nozzle Set 58 (Red) 102-6909		Nozzle Set 59 (Beige) 102-4259	
	Yellow 102-5670	Brown 102-5671	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885
Back Nozzle Positions	Red Plug 102-4335																	
PSI	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**
50	55	14.1	57	18.5	62	22.3	66	25.8	—	—	—	—	—	—	—	—	—	—
65	57	15.8	60	20.9	65	25.1	69	28.7	73	35.9	—	—	—	—	—	—	—	—
80	59	17.5	61	23.1	68	27.8	72	31.7	76	39.7	80	43.1	83	48.2	85	50.0	89	57.5
100	61	19.3	63	25.3	71	30.3	75	34.5	80	43.5	83	49.0	88	51.5	90	53.9	92	61.3

FLX55 Series Performance Chart—15°

PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	55	14.0	59	16.5	62	22.2	63	25.6	—	—	—	—	—	—	—	—	—	—
65	56	15.6	62	20.7	65	25.0	66	28.5	75	35.3	—	—	—	—	—	—	—	—
80	59	17.4	66	23.0	69	27.7	70	31.5	78	39.0	78	42.4	79	46.9	79	49.5	82	57.2
100	60	19.2	68	25.1	71	30.2	72	34.3	80	41.9	81	47.2	83	52.1	83	53.4	85	60.8
Stator	102-1939 Yellow								102-1940 White								102-1941 White	
Conversions	FLX55-5154								FLX55-5558								FLX55-59	

Not recommended at these pressures.
Toro recommends the use of a 1¼" swing joint at flows over 25-GPM. Sprinkler radius of throw per ASAE standard S398.1.
All sprinklers are equipped with the selectable pilot valve that allows settings at 50, 65, 80 and 100 psi.

FLX35 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	31	6' @ 51'	13' @ 54'
	32	6' @ 51'	11' @ 64'
	33	7' @ 59'	13' @ 68'
	34	8' @ 63'	15' @ 74'
	35	9' @ 66'	15' @ 76'
80 PSI	36	8' @ 75'	18' @ 83'
	37	9' @ 74'	19' @ 82'

FLX55 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	51	6' @ 51'	13' @ 54'
	52	6' @ 51'	11' @ 64'
	53	7' @ 59'	13' @ 68'
	54	8' @ 63'	15' @ 74'
	55	9' @ 66'	15' @ 76'
80 PSI	56	8' @ 75'	18' @ 83'
	57	9' @ 74'	19' @ 82'
	58	10' @ 82'	18' @ 87'
	59	11' @ 81'	21' @ 91'

FLEX800™ SERIES GOLF ROTORS FLX34/FLX54

NEW

Learn more at **Toro.com**

Dual Trajectory

Features & Benefits | Specifications | Performance Data

The NEW FLEX34/54 are the full circle irrigation sprinklers in the FLEX800™ Series. They come with dual trajectory main nozzle that provides exceptional nozzle performance at the 25° standard angle position and great performance in windy applications at the 15° low angle position. And the consistency of the constant velocity full circle drive ensures even water application across the coverage area every time you water.

Features & Benefits

1. **Dual Trajectory - 25° or 15°**
Provides two selections for the main nozzle trajectory; the 25 degree setting provides maximum distance of throw and the 15 degree setting provides improved wind performance, radius reduction and obstacle avoidance.

2. **Industry's Largest Nozzle Selection**
Nozzles from 15,8 – 30,5m (52' to 100') plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it. All nozzles threaded in from front.

3. **Stainless Steel Valve Seat**
Eliminates body damage from rocks and debris. This in-destructible stainless steel seat is molded to the body and virtually eliminates body replacements due to seat damage.

4. **Optional Radius Reduction Screw**
Allows for fine tuning the radius to exactly the distance you need. In combination with main nozzle sizing and trajectory adjustment the radius reduction screw can effectively reduce the sprinkler throw down to 9,1m (30').

5. **Constant Velocity Full Circle Drive**
Ensures consistent rotation speeds when matched with station run times for even water application across the coverage area every time you water.

Weight:
FLX34: 1,35kg (2.98 lbs.)

Weight:
FLX54: 1,68kg (3.70 lbs.)

FLEX800™SERIES GOLF ROTORS FLX34/FLX54

FLX34 Conversion Upgrades

Models	Description
• FLX34-3134	FLX34 w/31–34 Nozzles (#3 Nozzle)
• FLX34-3537	FLX34 w/35–37 Nozzles (#5 Nozzle)

FLX54 Conversion Upgrades

Models	Description
• FLX54-5154	FLX54 w/51–54 Nozzles (#3 Nozzle Installed)
• FLX54-5558	FLX54 w/55–58 Nozzles (#5 Nozzle)
• FLX54-59	FLX54 w/59 Nozzle

Features
- Dual Trajectory adjustment on main nozzle - 25° or 15°
- Full circle sprinklers
- Pop-up height to nozzle: 8,3cm (3.25")

Operating Specifications

Inlet
- FLX34: 25mm (1") ACME
- FLX54: 40mm (1.5") ACME

Radius
- FLX34: 15,8 – 27,7m (52' – 91')
- FLX54: 15,8 – 30,2m (52' – 99')

Flow Rate:
- FLX34: 48,8 - 177,5 LPM (13.0 – 46.9 GPM)
- FLX54: 50 - 233,9 LPM (13.2 – 61.8 GPM)

Precipitation Rates:
- FLX34: Minimum - 8,4mm/hr (0.33"/hr.); Maximum - 14mm/hr (0.55"/hr)
- FLX54: Minimum - 8,4mm/hr (0.33"/hr); Maximum 15,5mm/hr (0.61"/hr)

Pilot Valve:
- Selectable at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80,100 psi)

Recommended Operating Pressure Range:
- 4,5-6,9 Bar (65-100 psi)
- Maximum: 10,3 Bar (150 psi)
- Minimum: 2,8 Bar (40 psi)

Activation types – Electric Valve-in-Head:
- Standard Solenoid:
  - 24 VAC, 50/60 Hz
  - Inrush: 0.30 A
  - Holding 0.20 A
- Spike Guard Solenoid:
  - 24 VAC, 50/60 Hz
  - Inrush: 0.12 A
  - Holding 0.10 A
- Nickel-Plated Spike Guard Solenoid:
  - 24 VAC, 50/60 Hz
  - Inrush: 0.12 A
  - Holding 0.10 A
- DC Latching Solenoid (DCLS):
  - 12 VDC pulse or latching pulse
- Integrated GDC Module w/DCLS:
  - 12 VDC pulse or latching pulse

Nozzle Selection
- FLX34 has seven nozzle variation (31, 32, 33, 34, 35, 36 and 37)
- FLX54 has nine nozzle variations (51, 52, 53, 54, 55, 56, 57, 58 and 59)
- Three opposing nozzles, rotating stream pattern
- Two additional front nozzle positions

Dimensions
- Body diameter:
  - FLX34: 16,5cm (6.5")
  - FLX54: 19,1cm (7.5")
- Body height:
  - FLX34: 25,4cm (10")
  - FLX54: 28,9cm (11.375")
- Weight:
  - FLX34: 1,35kg (2.98 lbs.)
  - FLX54: 1,68kg (3.70 lbs.)

Warranty
- Two years; Five years when installed with Toro Swing Joints

Specifying Information—FLX34 & FLX54

FLXX4-XXX-X				
Body Inlet	*Arc*	*Nozzle*	*Pressure Regulation**	*Activation Type*
FLXX	4	XX	X	X
3— 25mm (1") 5— 40mm (1.5")	4—Full Circle	FLX34—31, 32, 33 , 34, 35, 36, 37 FLX54—51, 52, 53, 54, 55, 56, 57, 58, 59	6— 4,5 bar (65 psi) 8— 6,5 bar (80 psi) 1— 6,9 bar (100 psi)	1—Standard Solenoid 2—Spike Guard™ Solenoid 3—Nickel-plated Spike Guard Solenoid 4—DC Latching Solenoid (DCLS) 5—Integrated GDC Module w/DCLS
Example: When specifying a FLX34 Series Sprinkler with #34 nozzle, pressure regulation at 4,5 bar (65 psi), and Spike Guard™ Solenoid you would specify: FLX34-346-2				

** Electric models only. All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar (50, 65, 80 and 100 psi).*
Note: Not all models available. Nickel-plated, corrosion-resistant models are available upon request.

FLX34 Series Performance Chart—25° (Metric)

Front Nozzle Positions	Nozzle Set 31 (Yellow) 102-0725	Nozzle Set 32 (Blue) 102-7001	Nozzle Set 33 (Brown) 102-0727	Nozzle Set 34 (Orange) 102-7002	Nozzle Set 35 (Green) 102-6908	Nozzle Set 36 (Gray) 102-0730	Nozzle Set 37 (Black) 102-4261
	Red Plug 102-4335						

Back Nozzle Positions			Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Gray 102-6945
Bar	kPa	kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	17,4	49,2	17,7	58,7	19,5	82,9	20,7	92,4	—	—	—	—	—	—
4,5	450	4,59	17,7	55,3	18,3	68,1	20,7	92,4	22,0	106,4	23,2	121,9	—	—	—	—
5,5	550	5,61	18,3	61,3	19,2	77,6	22,0	101,8	23,2	117,7	24,4	134,7	25,3	144,6	25,9	157,1
6,9	690	7,04	18,9	67,8	20,1	88,6	22,9	112,8	24,1	132,1	25,6	148,8	26,8	164,3	27,8	177,5

FLX34 Series Performance Chart—15°

Bar	kPa	kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	15,9	48,8	16,2	59,0	18,3	82,1	18,9	96,5	—	—	—	—	—	—
4,5	450	4,59	16,2	54,5	16,5	64,7	18,6	91,6	19,5	106,0	20,4	121,5	—	—	—	—
5,5	550	5,61	17,1	60,6	17,4	71,9	19,8	100,7	21,0	117,3	22,3	134,4	23,2	143,8	23,5	156,3
6,9	690	7,04	17,4	66,2	18,0	77,6	20,4	111,7	21,7	128,3	22,9	145,3	24,4	163,1	24,7	177,1
Stator			102-6929 Blue								102-1940 White					
Conversions			FLX34-3134								FLX34-3537					

FLX54 Series Performance Chart—25° (Metric)

Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-0725	Nozzle Set 52 (Blue) 102-7001	Nozzle Set 53 (Brown) 102-0727	Nozzle Set 54 (Orange) 102-7002	Nozzle Set 55 (Green) 102-6908	Nozzle Set 56 (Gray) 102-0730	Nozzle Set 57 (Black) 102-4261	Nozzle Set 58 (Red) 102-4260	Nozzle Set 59 (Beige) 102-4259
	Red Plug 102-4335								

Back Nozzle Positions			Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-6944	Yellow 102-6937	Gray 102-6945	Yellow 102-6937	Gray 102-6945	Yellow 102-6937	Gray 102-6945
Bar	kPa	kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	17,7	50,0	18,0	59,4	19,5	83,3	21,4	99,2	-	-	-	-	-	-	-	-	-	-
4,5	450	4,59	18,3	56,0	18,6	66,2	20,7	93,9	22,6	110,9	24,1	129,4	-	-	-	-	-	-	-	-
5,5	550	5,61	18,6	62,1	19,5	75,7	22,0	104,5	23,8	123,4	25,3	143,8	25,9	154,0	26,5	169,9	27,8	190,0	29,3	210,4
6,9	690	7,04	19,2	68,5	20,4	89,3	22,9	115,1	24,7	138,9	26,5	160,9	27,5	173,4	28,4	190,0	29,0	209,7	30,2	233,9

FLX54 Series Performance Chart—15°

Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,4	340	3,47	15,9	50,0	16,2	59,8	18,6	83,3	19,8	98,4	-	-	-	-	-	-	-	-	-	-
4,5	450	4,59	16,2	56,0	16,5	65,9	19,2	93,9	20,4	110,5	21,0	129,1	-	-	-	-	-	-	-	-
5,5	550	5,61	17,1	62,1	17,7	73,4	20,7	104,5	22,0	123,0	22,9	143,1	24,1	152,9	24,7	168,8	25,9	188,9	26,5	209,3
6,9	690	7,04	17,7	68,5	18,3	79,9	21,7	115,1	22,9	137,8	24,1	160,1	25,6	172,2	26,5	188,9	27,1	208,6	28,7	232,8
Stator			102-6929 Blue								102-1940 White								102-1941 White	
Conversions			FLX54-5154								FLX54-5558								FLX54-59	

Not recommended at these pressures. Radius shown in meter.
Toro recommends the use of a 30mm swing joint at flows over 95-LPM. Sprinkler radius of throw per ASAE standard S398.1.
Actual site conditions must be considered when selecting the appropriate nozzle.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5 and 6,9 Bar.

FLX34 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 bar	31	1,8 @ 15,6	4,0 @ 16,5
	32	1,8 @ 15,6	3,4 @ 19,5
	33	2,1 @ 18,0	4,0 @ 20,7
	34	2,4 @ 19,2	4,6 @ 22,6
	35	2,7 @ 20,1	4,6 @ 23,2
5,5 bar	36	2,4 @ 22,9	5,5 @ 25,3
	37	2,7 @ 22,6	5,8 @ 25,0

FLX54 Nozzle Apex—(Metric)

Pressure	Nozzle	Apex at 15°	Apex at 25°
4,5 Bar	51	1,8 @ 15,6	4,0 @ 16,5
	52	1,8 @ 15,6	3,4 @ 19,5
	53	2,1 @ 18,0	4,0 @ 20,7
	54	2,4 @ 19,2	4,6 @ 22,6
	55	2,7 @ 20,1	4,6 @ 23,2
5,5 Bar	56	2,4 @ 22,9	5,5 @ 25,3
	57	2,7 @ 22,6	5,8 @ 25,0
	58	3,0 @ 25,0	5,5 @ 26,5
	59	3,4 @ 24,7	6,4 @ 27,1

FLX34 Series Performance Chart—25° (U.S.)

Front Nozzle Positions	Nozzle Set 31 (Yellow) 102-0725	Nozzle Set 32 (Blue) 102-7001	Nozzle Set 33 (Brown) 102-0727	Nozzle Set 34 (Orange) 102-7002	Nozzle Set 35 (Green) 102-6908	Nozzle Set 36 (Gray) 102-0730	Nozzle Set 37 (Black) 102-4261
	Red Plug 102-4335						
Back Nozzle Positions	Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Gray 102-6945
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	57	13.0	58	15.5	64	21.9	68	24.4	—	—	—	—	—	—
65	58	14.6	60	18.0	68	24.4	72	28.1	76	32.2	—	—	—	—
80	60	16.2	63	20.5	72	26.9	76	31.1	80	35.6	83	38.2	85	41.5
100	62	17.9	66	23.4	75	29.8	79	34.9	84	39.3	88	43.4	91	46.9

FLX34 Series Performance Chart—15°

psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	52	12.9	53	15.6	60	21.7	62	25.5	—	—	—	—	—	—
65	53	14.4	54	17.1	61	24.2	64	28.0	67	32.1	—	—	—	—
80	56	16.0	57	19.0	65	26.6	69	31.0	73	35.5	76	38.0	77	41.3
100	57	17.5	59	20.5	67	29.5	71	33.9	75	38.4	80	43.1	81	46.8
Stator	102-6929 Blue								102-1940 White					
Conversions	FLX34-3134								FLX34-3537					

FLX54 Series Performance Chart—25° (U.S.)

Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-0725	Nozzle Set 52 (Blue) 102-7001	Nozzle Set 53 (Brown) 102-0727	Nozzle Set 54 (Orange) 102-7002	Nozzle Set 55 (Green) 102-6908	Nozzle Set 56 (Gray) 102-0730	Nozzle Set 57 (Black) 102-4261	Nozzle Set 58 (Red) 102-4260	Nozzle Set 59 (Beige) 102-4259
	Red Plug 102-4335								
Back Nozzle Positions	Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-6944	Yellow 102-6937	Gray 102-6945	Yellow 102-6937	Gray 102-6945	Yellow 102-6937	Gray 102-6945
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	58	13.2	59	15.7	64	22.0	70	26.2	—	—	—	—	—	—	—	—	—	—
65	60	14.8	61	17.5	68	24.8	74	29.3	79	34.2	—	—	—	—	—	—	—	—
80	61	16.4	64	20.0	72	27.6	78	32.6	83	38.0	85	40.7	87	44.9	91	50.2	96	55.6
100	63	18.1	67	23.6	75	30.4	81	36.7	87	42.5	90	45.8	93	50.2	95	55.4	99	61.8

FLX54 Series Performance Chart—15°

psi	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
50	52	13.2	53	15.8	61	22.0	65	26.0	—	—	—	—	—	—	—	—	—	—
65	53	14.8	54	17.4	63	24.8	67	29.2	69	34.1	—	—	—	—	—	—	—	—
80	56	16.4	58	19.4	68	27.6	72	32.5	75	37.8	79	40.4	81	44.6	85	49.9	87	55.3
100	58	18.1	60	21.1	71	30.4	75	36.4	79	42.3	84	45.5	87	49.9	89	55.1	94	61.5
Stator	102-6929 Blue								102-1940 White								102-1941 White	
Conversions	FLX54-5154								FLX54-5558								FLX54-59	

Not recommended at these pressures. Radius shown in feet.
Toro recommends the use of a 1 1/4" swing joint at flows over 25-GPM. Sprinkler radius of throw per ASAE standard S398.1.
Actual site conditions must be considered when selecting the appropriate nozzle.
All sprinklers are equipped with the selectable pilot valve that allows settings at 50, 65, 80 and 100 psi.

FLX34 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	31	6' @ 51'	13' @ 54'
	32	6' @ 51'	11' @ 64'
	33	7' @ 59'	13' @ 68'
	34	8' @ 63'	15' @ 74'
	35	9' @ 66'	15' @ 76'
80 PSI	36	8' @ 75'	18' @ 83'
	37	9' @ 74'	19' @ 82'

FLX54 Nozzle Apex—(U.S.)

Pressure	Nozzle	Apex at 15°	Apex at 25°
65 PSI	51	6' @ 51'	13' @ 54'
	52	6' @ 51'	11' @ 64'
	53	7' @ 59'	13' @ 68'
	54	8' @ 63'	15' @ 74'
	55	9' @ 66'	15' @ 76'
80 PSI	56	8' @ 75'	18' @ 83'
	57	9' @ 74'	19' @ 82'
	58	10' @ 82'	18' @ 87'
	59	11' @ 81'	21' @ 91'

FLEX800™ B SERIES GOLF ROTORS

NEW

Learn more at **Toro.com**

The FLEX800™ B Series golf sprinkler family brings you all the great features and performance of the FLEX800 35-6, 34 and 35 Series sprinklers in a more economical body package specifically designed for block systems. With its rugged golf body design, small exposed surface diameter, flanged body for stability and check valve these sprinklers are perfect for every golf application.

Features & Benefits | Specifications | Performance Data

Main Nozzle Adapter
A wide assortment of intermediate and inner nozzles for use in the main nozzle adapter and back nozzle position provide unmatched nozzle flexibility.

Features & Benefits

1. **Industry's Largest Nozzle Selection**
Nozzles from 7,6 – 29,0m (25' to 95') radius, plus a wide assortment of intermediate and inner nozzles, provide unmatched flexibility allowing you to put the precise amount of water exactly where you need it. All nozzles threaded in from front.

2. **True Part Full-Circle in One – (40° - 330° part circle)**
These sprinklers can be full circle or part circle allowing you to adjust the area of coverage to match your seasonal needs or meet water rationing mandates.

3. **Flanged Cap Installs Below Grade**
Stabilizes the body position and maintains optimum nozzle performance.

4. **Small Exposed Diameter**
Minimizes the appearance of the sprinkler to maximize the beauty of the course. Perfect for high traffic areas like tees, greens and surrounds.

FLX35-6B

Weight:
FLX35-6B: 0,9kg (1.99 lbs)

FLX34B and FLX35B

Weight:
FLX35B: 0,9kg (2 lbs)
FLX34B: 0,89kg (1.97 lbs)

FLEX800™ B SERIES GOLF ROTORS

Nozzle Trajectory Provides Unmatched Performance
FLX35-6B with TruJectory™ adjustment from 7°-30° in 1° increments and FLX35/FLX34 models with dual trajectory settings of 25° or 15° provide improved wind performance, obstacle avoidance and radius adjustment.

FLX35-6B

FLX34B and FLX35B

Features
- Ratcheting riser
- Nozzle base clutching – Part circle models

Operating Specifications
- Inlet:
  - 25mm (1") NPT, BSP or ACME
- Radius:
  - FLX35-6B: 9m – 29m (29'– 95')
  - FLX35B: 9m – 27m (29'– 90')
  - FLX34B: 17m – 29m (57'– 95')
- Flow Rate:
  - FLX35-6B: 26,8 – 198,7 LPM (7.1 – 52.5 gpm)
  - FLX35B: 31,0 – 213,1 LPM (8.2 – 56.3 gpm)
  - FLX34B: 49,2 – 209,7 LPM (13.0 – 55.4 gpm)
- Precipitation Rates:
  - FLX35-6B: 8,6 – 14,2 mm/hr (0.34 in/hr – 0.56 in/hr)
  - FLX35B: 9,3 – 17,0 mm/hr (0.37 in/hr – 0.67 in/hr)
  - FLX34B: 8,3 – 14,9 mm/hr (0.33 in/hr – 0.59 in/hr)
- Recommended Operating Pressure
  - 4,4 – 6,9 Bar (65-100 psi)
- Trajectory:
  - FLX35-6B – 7°-30° in 1° increments; 24 positions
  - FLX35B - 15° or 25° - 2 positions
  - FLX34B - 15° or 25° - 2 positions
- Check-O-Matic feature prevents low head drainage up to 10' of elevation change

Nozzle Selection
- Nozzle variations
  - FLX35-6B - Nine variations (30, 31, 32, 33, 34, 35, 36, 37 & 38)
  - FLX35B - Nine variations (30, 31, 32, 33, 34, 35, 36, 37 & 38)
  - FLX34B – Eight variations (31, 32, 33, 34, 35, 36, 37 & 38)
- Back nozzle capability on part circle models standard
  - FLX35-6B – one position available
  - FLX35B – two positions available
- FLX34B – two additional front nozzle positions
- Main-less capability for short radius applications
- Stator variations:
  - FLX35-6B, FLX35: 3
  - FLX34: 2
- Radius reduction screw for fine tuning the radius (363-4839). Standard on FLX35B; optional on FLX34B and not available on FLX35-6B models

Dimensions
- Body diameter: 15,2cm (6")
- Body height: 21,6cm (8.5")
- Weight:
  - FLX35-6B: 0,9kg (1.99 lbs)
  - FLX35B: 0,9kg (2 lbs)
  - FLX34B: 0,89kg (1.97 lbs)
- Pop-up height to nozzle: 8,25cm (3.25")

Warranty
- Two years; Five years when installed with Toro Swing Joints

Specifying Information—B Series

FLX3XB-X2-XXXXX

Series	*Arc*	*System*	*Thread Type*	*Valve Type*	*Nozzle*
FLX3	X	**B**	X	**2**	XXXX
FLX3—FLEX800 B Series	**4—Full-Circle (DT only) 5—Part-/Full-Circle 5-6--Part-/Full-Circle with TruJectory**	**B—Block**	**0—NPT 4—ACME 5—BSP**	**Check-O-Matic**	**3134— Includes nozzles #31, 32, 33 & 34 3538— Includes nozzles #35, 36, 37 & 38**

Example: When specifying a FLEX800 B Series Sprinkler with full circle - NPT threads, #34 nozzle, you would specify: FLX34B–02–3134

FLX35-6B Series Performance Chart—25° (Metric)

Base Pressure			Nozzle Set 30 (White) 102-2208		Nozzle Set 31 (Yellow) 102-4587		Nozzle Set 32 (Blue) 102-4588		Nozzle Set 33 (Brown) 102-4589		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-0729		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261		Nozzle Set 38 (Red) 102-6909	
			Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Red 102-2928	Gray 102-2910	Orange 102-2926	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910
			Back Nozzle 102-4335 Red Plug																	
Bar	kPa	kg/cm2	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
3,5	345	3,52	13	26,9	16	53,0	18	68,1	—	—	—	—	—	—	—	—	—	—	—	—
4,1	414	4,22	13	30,0	16	57,5	18	73,9	20	82,9	—	—	—	—	—	—	—	—	—	—
4,8	483	4,92	14	33,1	17	62,1	19	79,6	21	89,3	23	123,8	23	133,2	—	—	—	—	—	—
5,5	552	5,63	14	36,3	17	65,9	20	85,5	21	95,8	23	132,9	24	142,7	26	149,9	26	164,3	27	179,8
6,2	621	6,33	14	39,4	18	70,0	21	90,5	22	101,2	24	140,0	25	151,0	26	158,6	27	173,7	28	189,3
6,9	689	7,03	15	42,4	18	73,4	21	95,4	23	106,7	24	147,2	26	158,2	27	166,9	27	183,2	29	198,7
Stator			102-6929 Blue		102-1939 Yellow								102-1940 White							
Conversions					INF35-6-3134 (Requires screen replacement)								INF35-6-3537 (Requires screen replacement)							

FLX35B Series Performance Chart—25° (Metric)

Front Nozzle Positions			Nozzle Set 30 (White Plug) 102-2208		Nozzle Set 31 (Yellow) 102-6906		Nozzle Set 32 (Blue) 102-0726		Nozzle Set 33 (Brown) 102-6907		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-6955		Nozzle Set 36 (Gray) 102-6935		Nozzle Set 37 (Black) 102-6936		Nozzle Set 38 (Red) 102-6909	
Back Nozzle Positions			Yellow 102-5670	Biege 102-6942	Yellow 102-5670	Brown 102-5671	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885
			Back Nozzles 102-4335 Red Plug																	
Bar	kPa	kg/cm2	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm
3,5	345	3,52	13	31,0	17	51,5	17	69,3	—	—	—	—	—	—	—	—	—	—	—	—
4,1	414	4,22	13	35,2	17	56,8	18	76,1	19	91,6	—	—	—	—	—	—	—	—	—	—
4,8	483	4,92	14	39,3	18	61,3	18	82,5	20	99,5	21	113,6	22	140,0	—	—	—	—	—	—
5,5	552	5,63	14	43,5	18	65,5	19	88,2	20	106,0	22	121,5	23	149,9	24	162,4	24	184,0	26	191,5
6,2	621	6,33	14	47,1	18	69,6	19	93,5	21	112,8	22	129,4	23	159,0	24	171,8	25	194,9	27	202,9
6,9	689	7,03	14	50,7	19	73,1	20	98,4	21	118,8	23	135,9	24	167,3	25	184,7	25	205,1	27	213,1
Stator			102-6929 Blue		102-1939 Yellow								102-1940 White							
Conversions					FLX35-3134 (Requires screen replacement)								FLX35-3537 (Requires screen replacement)							

FLX34B Series Performance Chart—25° (Metric)

Front Nozzle Positions			Nozzle Set 31 (Yellow) 102-0725		Nozzle Set 32 (Blue) 102-7001		Nozzle Set 33 (Brown) 102-0727		Nozzle Set 34 (Orange) 102-7002		Nozzle Set 35 (Green) 102-6908		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261		Nozzle Set 38 (Red) 102-4260	
			Front Nozzles 102-4335 Red Plug															
Back Nozzle Positions			Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-6944	Yellow 102-6937	Gray 102-6945	Yellow 102-6937	Gray 102-6945
Bar	kPa	kg/cm2	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm
3,5	345	3,52	17	49,2	18	58,7	—	—	—	—	—	—	—	—	—	—	—	—
4,1	414	4,22	18	53,2	18	64,9	20	89,3	—	—	—	—	—	—	—	—	—	—
4,8	483	4,92	18	58,7	19	68,9	21	99,2	22	113,6	24	135,1	—	—	—	—	—	—
5,5	552	5,63	18	61,3	19	77,6	22	105,6	23	121,5	24	144,6	25	154,8	26	159,3	28	190,0
6,2	621	6,33	19	66,2	20	83,1	22	112,2	24	128,9	25	153,1	26	164,1	27	168,4	28	199,8
6,9	689	7,03	19	71,2	20	88,6	23	118,8	24	136,3	26	161,6	27	173,4	28	177,5	29	209,7
Stator			102-6929 Blue								102-1940 White							
Conversions			FLX34-3134 (Requires screen replacement)								FLX34-3537 (Requires screen replacement)							

Not recommended at these pressures. Radius shown in meter.
Toro recommends the use of a 30mm swing joint at flows over 95-LPM. Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1.
Actual site conditions must be considered when selecting the appropriate nozzle.
All sprinklers are equipped with the selectable pilot valve that allows settings at 3,4; 4,5; 5,5; and 6,9 Bar.

FLX35-6B Series Performance Chart—25° (U.S.)

Base Pressure	Nozzle Set 30 (White) 102-2208		Nozzle Set 31 (Yellow) 102-4587		Nozzle Set 32 (Blue) 102-4588		Nozzle Set 33 (Brown) 102-4589		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-0729		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261		Nozzle Set 38 (Red) 102-6909	
	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Red 102-2928	Gray 102-2910	Orange 102-2926	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910
	Back Nozzle 102-4335 Red Plug																	
PSI	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**
50	42	7.1	52	14.0	58	18.0	—	—	—	—	—	—	—	—	—	—	—	—
60	43	7.9	54	15.2	60	19.5	66	21.9	—	—	—	—	—	—	—	—	—	—
70	45	8.8	55	16.4	63	21.0	68	23.6	74	32.7	77	35.2	—	—	—	—	—	—
80	46	9.6	57	17.4	65	22.6	70	25.3	77	35.1	79	37.7	84	39.6	86	43.4	90	47.5
90	47	10.4	58	18.5	68	23.9	72	26.8	79	37.0	82	39.9	86	41.9	88	45.9	93	50.0
100	48	11.2	59	19.4	70	25.2	74	28.2	80	38.9	84	41.8	88	44.1	90	48.4	95	52.5
Stator	**102-6929 Blue**		102-1939 Yellow								102-1940 White							
Conversions			INF35-6-3134 (Requires screen replacement)								INF35-6-3537 (Requires screen replacement)							

FLX35B Series Performance Chart—25° (U.S.)

Front Nozzle Positions	Nozzle Set 30 (White Plug) 102-2208		Nozzle Set 31 (Yellow) 102-6906		Nozzle Set 32 (Blue) 102-0726		Nozzle Set 33 (Brown) 102-6907		Nozzle Set 34 (Orange) 102-0728		Nozzle Set 35 (Green) 102-6955		Nozzle Set 36 (Gray) 102-6935		Nozzle Set 37 (Black) 102-6936		Nozzle Set 38 (Red) 102-6909	
Back Nozzle Positions	Yellow 102-5670	Biege 102-6942	Yellow 102-5670	Brown 102-5671	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885
	Back Nozzles 102-4335 Red Plug																	
PSI	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**
50	43	8.2	55	13.6	56	18.3	—	—	—	—	—	—	—	—	—	—	—	—
60	44	9.3	56	15.0	58	20.1	63	24.2	—	—	—	—	—	—	—	—	—	—
70	45	10.4	58	16.2	60	21.8	65	26.3	69	30.0	73	37.0	—	—	—	—	—	—
80	46	11.5	59	17.3	62	23.3	67	28.0	71	32.1	75	39.6	78	42.9	80	48.6	85	50.6
90	47	12.5	60	18.4	64	24.7	69	29.8	73	34.2	77	42.0	80	45.4	82	51.5	88	53.6
100	47	13.4	61	19.3	65	26.0	70	31.4	74	35.9	79	44.2	81	48.8	83	54.2	90	56.3
Stator	102-6929 Blue		102-1939 Yellow								102-1940 White							
Conversions			FLX35-3134 (Requires screen replacement)								FLX35-3537 (Requires screen replacement)							

FLX34B Series Performance Chart—25° (U.S.)

Front Nozzle Positions	Nozzle Set 31 (Yellow) 102-0725		Nozzle Set 32 (Blue) 102-7001		Nozzle Set 33 (Brown) 102-0727		Nozzle Set 34 (Orange) 102-7002		Nozzle Set 35 (Green) 102-6908		Nozzle Set 36 (Gray) 102-0730		Nozzle Set 37 (Black) 102-4261		Nozzle Set 38 (Red) 102-4260	
	Front Nozzles 102-4335 Red Plug															
Back Nozzle Positions	Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-6944	Yellow 102-6937	Gray 102-6945	Yellow 102-6937	Gray 102-6945
PSI	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**	**Radius**	**GPM**
50	57	13.0	58	15.5	—	—	—	—	—	—	—	—	—	—	—	—
60	58	14.1	60	17.2	67	23.6	—	—	—	—	—	—	—	—	—	—
70	59	15.5	61	18.2	69	26.2	73	30.0	78	35.7	—	—	—	—	—	—
80	60	16.2	63	20.5	72	27.9	76	32.1	80	38.2	83	40.9	85	42.1	91	50.2
90	61	17.5	65	22.0	74	29.7	78	34.1	82	40.5	86	43.4	88	44.5	93	52.8
100	62	18.8	66	23.4	75	31.4	79	36.0	84	42.7	88	45.8	91	46.9	95	55.4
Stator	102-6929 Blue								102-1940 White							
Conversions	FLX34-3134 (Requires screen replacement)								FLX34-3537 (Requires screen replacement)							

Not recommended at these pressures. Radius shown in feet.
Toro recommends the use of a 1.25" swing joint at flows over 25-GPM. Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1.
Actual site conditions must be considered when selecting the appropriate nozzle.
All sprinklers are equipped with the selectable pilot valve that allows settings at 50, 65, 80 and 100 psi.

Intermediate Nozzle Performance Charts

102-2929 Beige		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	30,7	8.1	17.4	53	17.1	52	16.4	50	15.7	48	14.8	45	13.8	42
60	4,1	33,7	8.9	18.7	57	18.4	56	17.4	53	16.7	51	15.4	47	14.8	45
65	4,5	35,2	9.3	19.0	58	18.4	56	17.7	54	16.7	51	16.1	49	15.1	46
70	4,8	36,3	9.6	19.4	59	18.7	57	18.4	56	17.4	53	16.4	50	15.7	48
80	5,5	39,0	10.3	20.0	61	19.7	60	19.0	58	18.4	56	17.4	53	16.4	50
90	6,2	41,3	10.9	20.7	63	20.0	61	19.4	59	18.7	57	17.7	54	16.7	51
100	6,9	43,5	11.5	21.3	65	20.7	63	19.7	60	19.0	58	18.0	55	16.7	51

102-2928 Red		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	23,8	6.3	17.4	53	16.7	51	15.7	48	15.1	46	14.1	43	13.1	40
60	4,1	26,5	7.0	18.0	55	17.4	53	16.4	50	15.7	48	14.8	45	13.8	42
65	4,5	27,3	7.2	18.4	56	17.7	54	17.1	52	16.1	49	15.4	47	14.4	44
70	4,8	28,4	7.5	18.7	57	18.0	55	17.4	53	16.7	51	16.1	49	15.1	46
80	5,5	30,3	8.0	19.4	59	19.0	58	18.4	56	17.7	54	17.1	52	16.1	49
90	6,2	32,2	8.5	19.7	60	19.0	58	18.7	57	18.0	55	17.4	53	16.4	50
100	6,9	34,1	9.0	20.0	61	19.4	59	18.7	57	18.0	55	17.4	53	16.4	50

102-2927 Gray		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	18,9	5.0	16.4	50	15.7	48	15.1	46	14.4	44	13.5	41	12.5	38
60	4,1	20,8	5.5	17.1	52	16.4	50	15.7	48	15.1	46	14.1	43	13.1	40
65	4,5	21,6	5.7	17.4	53	16.7	51	16.1	49	15.1	46	14.4	44	13.5	41
70	4,8	22,3	5.9	17.4	53	16.7	51	16.1	49	15.4	47	14.8	45	13.8	42
80	5,5	23,8	6.3	17.7	54	17.1	52	16.4	50	15.7	48	15.1	46	14.1	43
90	6,2	25,4	6.7	18.0	55	17.4	53	17.1	52	16.4	50	15.7	48	14.8	45
100	6,9	26,9	7.1	18.0	55	17.7	54	17.4	53	17.1	52	16.4	50	15.1	46

102-2926 Orange		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	16,3	4.3	15.7	48	15.1	46	14.4	44	13.8	42	12.8	39	11.5	35
60	4,1	17,8	4.7	16.4	50	15.7	48	15.1	46	14.4	44	13.5	41	12.5	38
65	4,5	18,5	4.9	16.7	51	16.1	49	15.4	47	14.8	45	13.8	42	12.8	39
70	4,8	19,3	5.1	16.7	51	16.4	50	15.7	48	15.1	46	14.1	43	13.1	40
80	5,5	20,4	5.4	17.1	52	16.7	51	16.4	50	15.7	48	14.8	45	13.8	42
90	6,2	22,0	5.8	17.4	53	17.1	52	16.7	51	16.1	49	15.4	47	14.4	44
100	6,9	23,1	6.1	17.7	54	17.4	53	17.1	52	16.4	50	15.7	48	14.8	45

102-2925 Blue		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	10,2	2.7	13.8	42	13.5	41	12.8	39	12.5	38	11.8	36	11.2	34
60	4,1	11,4	3.0	14.1	43	13.8	42	13.1	40	12.8	39	12.1	37	11.5	35
65	4,5	12,1	3.2	14.1	43	13.8	42	13.1	40	12.8	39	12.1	37	11.5	35
70	4,8	12,5	3.3	14.4	44	13.8	42	13.5	41	12.8	39	12.5	38	11.8	36
80	5,5	13,2	3.5	14.4	44	14.1	43	13.5	41	13.1	40	12.5	38	11.8	36
90	6,2	14,0	3.7	14.8	45	14.4	44	13.8	42	13.5	41	12.8	39	12.1	37
100	6,9	14,8	3.9	14.8	45	14.4	44	14.1	43	13.8	42	13.1	40	12.5	38

MAIN NOZZLE ADAPTER PERFORMANCE CHARTS

102-6885 Green		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	20,4	5.4	16.7	51	16.4	50	15.7	48	14.8	45	13.8	42	12.8	39
60	4,1	22,3	5.9	17.1	52	16.7	51	16.1	49	15.1	46	14.1	43	13.5	41
65	4,5	23,1	6.1	17.1	52	16.7	51	16.4	50	15.4	47	14.4	44	13.8	42
70	4,8	23,8	6.3	17.4	53	17.1	52	16.4	50	15.4	47	14.4	44	13.8	42
80	5,5	25,4	6.7	17.4	53	17.1	52	16.7	51	15.7	48	14.8	45	14.1	43
90	6,2	26,9	7.1	17.7	54	17.4	53	17.1	52	16.4	50	15.4	47	14.8	45
100	6,9	28,0	7.4	18.0	55	18.0	55	17.7	54	17.1	52	16.1	49	15.4	47

102-6884 Yellow		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	15,5	4.1	15.7	48	15.4	47	14.8	45	13.5	41	12.5	38	11.5	35
60	4,1	17,0	4.5	16.1	49	15.7	48	15.4	47	14.4	44	13.5	41	12.5	38
65	4,5	17,8	4.7	16.4	50	16.1	49	15.7	48	14.8	45	13.8	42	12.8	39
70	4,8	18,2	4.8	16.4	50	16.1	49	15.7	48	14.8	45	14.1	43	13.1	40
80	5,5	19,3	5.1	16.7	51	16.4	50	16.1	49	15.4	47	14.4	44	13.5	41
90	6,2	20,4	5.4	17.4	53	17.1	52	16.4	50	15.7	48	14.8	45	13.8	42
100	6,9	22,0	5.8	17.7	54	17.4	53	16.7	51	16.1	49	15.1	46	14.1	43

102-6883 Brown		Trajectory		30°		25°		20°		15°		10°		7°	
Pressure		Flow		Radius		Radius		Radius		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	9,1	2.4	13.5	41	13.1	40	12.5	38	11.8	36	10.8	33	9.8	30
60	4,1	9,8	2.6	14.1	43	13.8	42	13.1	40	12.5	38	11.8	36	10.8	33
65	4,5	10,2	2.7	14.4	44	13.8	42	13.5	41	12.8	39	12.1	37	11.2	34
70	4,8	10,6	2.8	14.8	45	14.1	43	13.8	42	13.1	40	12.5	38	11.5	35
80	5,5	11,4	3.0	15.1	46	14.8	45	14.1	43	13.5	41	13.1	40	11.8	36
90	6,2	12,1	3.2	15.1	46	14.8	45	14.4	44	13.8	42	13.5	41	12.1	37
100	6,9	12,9	3.4	15.1	46	14.8	45	14.4	44	14.1	43	13.5	41	12.5	38

Inner Nozzle Performance Charts*

102-6937 Yellow		Trajectory		30°		25°		20°	
Pressure		Flow		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	14,0	3.7	8.5	26	7.9	24	6.6	20
60	4,1	15,1	4.0	9.2	28	8.2	25	7.2	22
65	4,5	15,9	4.2	9.2	28	8.2	25	7.2	22
70	4,8	16,7	4.4	9.2	28	8.5	26	7.5	23
80	5,5	17,8	4.7	9.2	28	8.5	26	7.9	24
90	6,2	18,9	5.0	9.5	29	8.9	27	8.2	25
100	6,9	19,7	5.2	9.8	30	9.5	29	8.9	27

102-6531 Green		Trajectory		30°		25°		20°	
Pressure		Flow		Radius		Radius		Radius	
PSI	BAR	LPM	GPM	Meters	Feet	Meters	Feet	Meters	Feet
50	3,4	15,1	4.0	10.5	32	9.8	30	8.5	26
60	4,1	16,3	4.3	11.2	34	10.2	31	8.9	27
65	4,5	17,0	4.5	11.2	34	10.2	31	8.9	27
70	4,8	17,8	4.7	11.2	34	10.2	31	9.2	28
80	5,5	18,9	5.0	11.2	34	10.5	32	9.5	29
90	6,2	20,1	5.3	11.2	34	10.5	32	9.5	29
100	6,9	21,2	5.6	11.5	35	10.8	33	9.8	30

* Not recommended below 20°

Main Nozzle Adaptor P/N 118-1521

FLEX800™ R SERIES CONVERSION UPGRADES

NEW

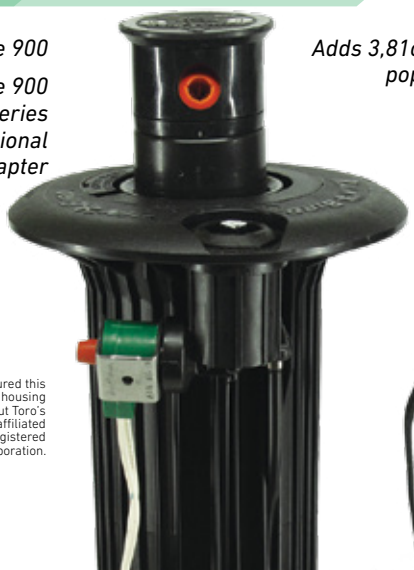
Learn more at **Toro.com**

The Toro FLEX800™ R Series Conversion Upgrades enable customers with existing Rain Bird® Eagle™ 900 and 1100 Series sprinklers to upgrade to Toro's industry leading sprinkler technology. The benefits of upgrading include the patented TruJectory™ adjustment, full and part circle in the same sprinkler, the ability to ratchet the riser and clutch the nozzle base, and an extra 3,81cm (1.5") pop-up height.

Features & Benefits | Specifications | Performance Data

Left: Rain Bird Eagle 900

Right: Rain Bird Eagle 900 upgraded with Toro R Series upgrade assembly and optional Spike Guard solenoid/adapter



Adds 3,81cm (1.5") of pop-up height

Features & Benefits

1. **Industry's Largest Nozzle Selection**
Nozzles from 12,8 – 30,5m (42' to 100') radius plus a wide assortment of back nozzles lets you put the precise amount of water exactly where you need it.

2. **20,000 Volt Lightning Rating**
Spike Guard™ solenoid virtually eliminates the need for replacements in high lightning areas. Draws half the amperage of traditional solenoids so you can run twice as many sprinklers simultaneously, reduce the cost of wire during installation or increase the distance from controller to sprinkler.

3. **Dual Trajectory**
The 25° setting provides maximum distance of throw and the 15° setting provides improved wind performance, radius reduction and obstacle avoidance (FLX54RB & FLX55RB).

4. **True Part- and Full-Circle in One – (40° - 330° part circle)**
These sprinklers can be full circle today and part circle tomorrow allowing you to simply and economically adjust the area of coverage to match your seasonal needs or meet water rationing mandates (FLX55-6RB & FLX55RB).

FLX55-6RB

FLX55RB

FLX54RB

FLEX800™ R SERIES CONVERSION UPGRADES

SPECIFICATIONS

Operational

- Ratcheting riser allows riser positioning without riser removal.
- Recommended Operating Pressure Range: 4,1 6,9 Bar (60-100 psi) (maximum – 10,3 Bar (150 psi) and minimum – 2,7 Bar (40 psi)
- Radius reduction screw for radius refinement
- Riser pull-up feature simplifies servicing
- Yardage marker capable
- 8,26cm (3.25") pop-up clears tall grasses

Nozzles

- 4 main nozzle combinations included provides a wide range of radius and flow capabilities.
- Back nozzle capable (FLX55-6RB & FLX55RB)
- Two additional front nozzle positions (FLX54RB only)
- Nozzle base clutching (FLX55-6RB & FLX55RB) allows nozzle base movement by hand
- All nozzles threaded from the front with no disassembly required.

Specifying Information—R Series Conversion Assemblies

Model Number	*Description*
FLX55-6RB-5154	R Series Conversion with FLX55-6 riser assembly and low flow nozzle set #51 - #54
FLX55-6RB-5558	R Series Conversion with FLX55-6 riser assembly and high flow nozzle set #55 - #58
FLX55RB-5154	R Series Conversion with FLX55 riser assembly and low flow nozzle set #51 - #54
FLX55RB-5558	R Series Conversion with FLX55 riser assembly and high flow nozzle set #55 - #58
FLX54RB-5154	R Series Conversion with FLX54 riser assembly and low flow nozzle set #51 - #54
FLX54RB-5558	R Series Conversion with FLX54 riser assembly and high flow nozzle set #55 - #58

Specifying Information—R Series Solenoid Adaptors

Model Number	*Description*
SPIKEGUARD-RB	Toro solenoid adapter with Spike Guard™ solenoid for Rain Bird Eagle 700, 900 or 1100 Series sprinklers

FLX55-6RB-5154 Performance Chart—(Metric)											FLX55-6RB-5558 Performance Chart—(Metric)							
Front Nozzle Positions			Nozzle Set 51 (Yellow) 102-4587		Nozzle Set 52 (Blue) 102-4588		Nozzle Set 53 (Brown) 102-4589		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-0729		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260	
			Blue 102-2925	Gray 102-2910	Red 102-2928	Gray 102-2910	Orange 102-2926	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910
Back Nozzle Positions			Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335	
Bar	kPa	kg/cm²	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm
4,1	414	4,22	16,8	60,9	19,2	76,8	21,0	88,6	22,9	118,5	–	–	–	–	–	–	–	–
4,8	483	4,92	17,1	65,9	20,1	82,5	21,3	95,8	23,2	127,9	–	–	–	–	–	–	–	–
5,5	552	5,63	17,4	70,0	20,7	88,2	21,9	102,2	23,5	136,3	24,4	148,0	25,9	155,2	26,8	171,9	28,0	188,1
6,2	621	6,33	17,7	73,4	21,3	92,7	22,9	107,9	24,1	144,2	25,3	157,1	26,5	164,7	27,7	182,5	28,6	199,9
6,9	689	7,03	18,0	77,6	21,9	98,0	23,2	113,6	24,4	152,2	26,2	165,4	27,4	173,0	28,6	191,5	29,3	209,3
Stator			102-1939 Yellow								102-1940 White							
Conversion			FLX55-6RB-5154								FLX55-6RB-5558							

FLX55-6RB-5154 Performance Chart—(U.S.)									FLX55-6RB-5558 Performance Chart—(U.S.)							
Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-4587		Nozzle Set 52 (Blue) 102-4588		Nozzle Set 53 (Brown) 102-4589		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-0729		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260	
	Blue 102-2925	Gray 102-2910	Red 102-2928	Gray 102-2910	Orange 102-2926	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910	Blue 102-2925	Gray 102-2910	Orange 102-2926	Gray 102-2910	Blue 102-2925	Gray 102-2910
Back Nozzle Positions	Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335		Red Plug 102-4335	
PSI	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm
60	55	16.1	63	20.3	69	23.4	75	31.3	–	–	–	–	–	–	–	–
70	56	17.4	66	21.8	70	25.3	76	33.8	–	–	–	–	–	–	–	–
80	57	18.5	68	23.3	72	27.0	77	36.0	80	39.1	85	41.0	88	45.4	92	49.7
90	58	19.4	70	24.5	75	28.5	79	38.1	83	41.5	87	43.5	91	48.2	94	52.8
100	59	20.5	72	25.9	76	30.0	80	40.2	86	43.7	90	45.7	94	50.6	96	55.3
Stator	102-1939 Yellow								102-1940 White							
Conversion	FLX55-6RB-5154								FLX55-6RB-5558							

FLX55RB-5154 Performance Chart—(Metric)											FLX55RB-5558 Performance Chart—(Metric)							
Front Nozzle Positions			Nozzle Set 51 (Yellow) 102-6906		Nozzle Set 52 (Blue) 102-0726		Nozzle Set 53 (Brown) 102-6907		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-6955		Nozzle Set 56 (Gray) 102-6935		5Nozzle Set 57 (Black) 102-6936		Nozzle Set 58 (Red) 102-6909	
			Yellow 102-5670	Brown 102-5671	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885
Back Nozzle Positions			Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335
Bar	kPa	kg/cm²	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm
4,1	414	4,22	17,1	57,5	17,4	76,1	20,1	92,0	20,7	106,0	–	–	–	–	–	–	–	–
4,8	483	4,92	17,7	62,5	18,3	82,1	20,4	99,2	21,6	115,1	–	–	–	–	–	–	–	–
5,5	552	5,63	18,0	66,2	18,9	87,4	20,7	105,2	21,9	120,0	23,2	150,3	24,4	163,2	25,3	182,5	25,9	200,6
6,2	621	6,33	18,3	69,7	19,5	92,7	21,6	109,0	22,6	130,6	23,8	163,2	24,7	170,7	26,2	193,8	26,5	212,0
6,9	689	7,03	18,6	73,1	20,1	95,8	21,9	114,7	22,9	138,2	24,4	172,2	25,0	185,5	27,4	206,3	27,1	223,3
Stator			102-1939 Yellow								102-1940 White							
Conversion			FLX55RB-5154								FLX55RB-5558							

FLX55RB-5154 Performance Chart—(U.S.)									FLX55RB-5558 Performance Chart—(U.S.)							
Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-6906		Nozzle Set 52 (Blue) 102-0726		Nozzle Set 53 (Brown) 102-6907		Nozzle Set 54 (Orange) 102-0728		Nozzle Set 55 (Green) 102-6955		Nozzle Set 56 (Gray) 102-6935		5Nozzle Set 57 (Black) 102-6936		Nozzle Set 58 (Red) 102-6909	
	Yellow 102-5670	Brown 102-5671	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Yellow 102-6884	Yellow 102-5670	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885	Green 102-6531	Green 102-6885
Back Nozzle Positions	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335
PSI	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm
60	56	15.2	57	20.1	66	24.3	68	28.0	–	–	–	–	–	–	–	–
70	58	16.5	60	21.7	67	26.2	71	30.4	–	–	–	–	–	–	–	–
80	59	17.5	62	23.1	68	27.8	72	31.7	76	39.7	80	43.1	83	48.2	85	53.0
90	60	18.4	64	24.5	71	28.8	74	34.5	78	43.1	81	45.1	86	51.2	87	56.0
100	61	19.3	66	25.3	72	30.3	75	36.5	80	45.5	82	49.0	90	54.5	89	59.0
Stator	102-1939 Yellow								102-1940 White							
Conversion	FLX55RB-5154								FLX55RB-5558							

MAIN NOZZLE DATA

FLX54RB-5154 Performance Chart—(Metric)											FLX54RB-5558 Performance Chart—(Metric)							
Front Nozzle Positions			Nozzle Set 51 (Yellow) 102-0725		Nozzle Set 52 (Blue) 102-7001		Nozzle Set 53 (Brown) 102-0727		Nozzle Set 54 (Orange) 102-7002		Nozzle Set 55 (Green) 102-6908		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260	
			Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Brown 102-6883	Red Plug 102-4335	Brown 102-6883
Back Nozzle Positions			Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Gray 102-4965	Yellow 102-6937	Gray 102-4965
Bar	kPa	kg/cm²	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm	rad/m	lpm
4,1	414	4,22	18,0	55,3	18,9	65,9	20,7	92,0	21,6	106,7	–	–	–	–	–	–	–	–
4,8	483	4,92	18,3	59,4	19,2	71,2	21,3	99,6	22,9	115,8	–	–	–	–	–	–	–	–
5,5	552	5,63	18,6	62,1	19,5	75,7	21,9	104,5	23,8	123,4	25,3	149,5	25,9	161,6	26,5	173,8	27,7	190,0
6,2	621	6,33	18,9	67,4	20,1	80,6	22,6	113,2	24,4	131,4	25,9	157,5	26,8	170,0	27,4	183,6	28,3	199,9
6,9	689	7,03	19,2	68,5	20,4	89,3	22,9	115,1	24,7	138,9	26,5	165,4	27,4	177,2	28,3	193,8	29,0	209,7
Stator			102-6929 Blue								102-1940 White							
Conversion			FLX54RB-5154								FLX54RB-5558							

Not recommended at these pressures. Radius shown in metres.

Toro recommends the use of a 3,18cm (1.25") swing joint at flows over 95-LPM (25-GPM). Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1. Actual site conditions must be considered when selecting the appropriate nozzle.

FLX54RB-5154 Performance Chart—(U.S.)									FLX54RB-5558 Performance Chart—(U.S.)							
Front Nozzle Positions	Nozzle Set 51 (Yellow) 102-0725		Nozzle Set 52 (Blue) 102-7001		Nozzle Set 53 (Brown) 102-0727		Nozzle Set 54 (Orange) 102-7002		Nozzle Set 55 (Green) 102-6908		Nozzle Set 56 (Gray) 102-0730		Nozzle Set 57 (Black) 102-4261		Nozzle Set 58 (Red) 102-4260	
	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Red Plug 102-4335	Brown 102-6883	Red Plug 102-4335	Brown 102-6883
Back Nozzle Positions	Yellow 102-6937	Blue 102-2925	Yellow 102-6937	Orange 102-2926	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Beige 102-2929	Yellow 102-6937	Red 102-2928	Yellow 102-6937	Gray 102-4965	Yellow 102-6937	Gray 102-4965
PSI	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm	rad/ft	gpm
60	59	14.6	62	17.4	68	24.3	71	28.2	–	–	–	–	–	–	–	–
70	60	15.7	63	18.8	70	26.3	75	30.6	–	–	–	–	–	–	–	–
80	61	16.4	64	20.0	72	27.6	78	32.6	83	39.5	85	42.7	87	45.9	91	50.2
90	62	17.8	66	21.3	74	29.9	80	34.7	85	41.6	88	44.9	90	48.5	93	52.8
100	63	18.1	67	23.6	75	30.4	81	36.7	87	43.7	90	46.8	93	51.2	95	55.4
Stator	102-6929 Blue								102-1940 White							
Conversion	FLX54RB-5154								FLX54RB-5558							

Not recommended at these pressures. Radius shown in feet.

Toro recommends the use of a 3,18cm (1.25") swing joint at flows over 25-GPM (95-LPM). Sprinkler radius data collected in Toro's zero wind test facility per ASAE standard S398.1. Actual site conditions must be considered when selecting the appropriate nozzle.

					Models Being Replaced										
New Model	Arc	Trajectory	Radius	Flow-GPM	634	664	734	764	765	864S	865S	834S	835S	DT34	DT35
FLX34-3134	Full Circle	25° or 15°	52' - 79'	12.9 - 34.9	X	X	X	X	X	X	X	X	X	X	X
FLX34-3537	Full Circle	25° or 15°	67' - 91'	32.1 - 46.9	X	X	X	X	X	X	X	X	X	X	X
FLX35-3134	Part/Full Circle	25° or 15°	52' - 74'	13.6 - 34.1			1	X	X	X	X	X	X	X	X
FLX35-3537	Part/Full Circle	25° or 15°	69' - 83'	33.1 - 47.3			1	X	X	X	X	X	X	X	X
FLX35-6-3134	Part/Full Circle	30° – 7°	46' - 80'	15.5 - 37.0			1	X	X	X	X	X	X	X	X
FLX35-6-3537	Part/Full Circle	30° – 7°	59' - 92'	32.4 - 45.3			1	X	X	X	X	X	X	X	X

1. Must have ribbed bodies manufactured after 1992 to use Part/Full circles.

					Models Being Replaced													
New Model	Arc	Trajectory	Radius	Flow-GPM	654	655	670	684	690	754	784	785	884S	885S	854S	855S	DT54	DT55
FLX54-5154	Full Circle	25° or 15°	58' - 81'	13.2 - 36.7	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX54-5558	Full Circle	25° or 15°	79' - 95'	34.2 - 55.4	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX54-59	Full Circle	25° or 15°	96' - 99'	55.6 - 61.8	2	2	2	2	4	2	2	2	X	X	X	X	X	X
FLX55-5154	Part/Full Circle	25° or 15°	55' - 75'	14.0 - 34.5					4	2	2	2	X	X	X	X	X	X
FLX55-5558	Part/Full Circle	25° or 15°	73' - 90'	35.3 - 53.9					4	2	2	2	X	X	X	X	X	X
FLX55-59	Part/Full Circle	25° or 15°	82' - 92'	57.2 - 61.3					4	2	2	2	X	X	X	X	X	X
FLX55-6-5154	Part/Full Circle	30° – 7°	46' - 80'	13.9 - 38.2					4	2	2	2	X	X	X	X	X	X
FLX55-6-5558	Part/Full Circle	30° – 7°	59' - 95'	33.8 - 51.1					4	2	2	2	X	X	X	X	X	X
FLX55-6-59	Part/Full Circle	30° – 7°	77' - 100'	57.0 - 61.1					4	2	2	2	X	X	X	X	X	X
FLX55-5154R	Part/Full Circle	25° or 15°	55' - 75'	14.0 - 34.5	3	3	3	3		3								
FLX55-5558R	Part/Full Circle	25° or 15°	73' - 90'	35.3 - 53.9	3	3	3	3		3								
FLX55-59R	Part/Full Circle	25° or 15°	82' - 92'	57.2 - 61.3	3	3	3	3		3								
FLX55-6-5154R	Part/Full Circle	30° – 7°	46' - 80'	13.9 - 38.2	3	3	3	3		3								
FLX55-6-5558R	Part/Full Circle	30° – 7°	59' - 95'	33.8 - 51.1	3	3	3	3		3								
FLX55-6-59R	Part/Full Circle	30° – 7°	77' - 100'	57.0 - 61.1	3	3	3	3		3								

2. Requires the separate purchase and use of 102-0950 conversion adapter.
3. Use the "R" Series (Ribless body) conversion for bodies dated prior to 1992.
4. Requires the separate purchase and use of 102-5011 690 conversion adapter.

FLX55-6RB Series Mainless Nozzle Performance Data—(Metric)

			 Blue - Plug - Gray 102-2925 102-2208 102-2910		 Orange - Plug - Gray 102-2926 - 102-2208 - 102-2910		 Red - Plug - Gray 102-2928 - 102-2208 - 102-2910		 Gray - Plug - Gray 102-2910 - 102-2208 - 102-2910		 Gray - Plug - Gray 102-2930 - 102-2208 - 102-2910	
Bar	kPa	kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
4,5	448	4,6	14,0	32,9	14,0	39,4	15,2	46,9	12,8	38,6	14,3	52,6
SOR			5:02		4:16		3:36		4:19		4:06	
5,5	552,	5,6	14,0	36,3	14,3	43,5	16,2	51,9	13,4	42,4	15,5	57,9
SOR			4:22		3:40		3:03		3:53		3:40	

FLX55-6RB Series Mainless Nozzle Performance Data—(U.S.)

	Blue - Plug - Gray 102-2925 102-2208 102-2910		Orange - Plug - Gray 102-2926 - 102-2208 - 102-2910		Red - Plug - Gray 102-2928 - 102-2208 - 102-2910		Gray - Plug - Gray 102-2910 - 102-2208 - 102-2910		Gray - Plug - Gray 102-2930 - 102-2208 - 102-2910	
PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
65	46	8.7	46	10.4	50	12.4	42	10.2	47	13.9
SOR	5:02		4:16		3:36		4:19		4:06	
80	46	9.6	47	11.5	53	13.7	44	11.2	51	15.3
SOR	4:22		3:40		3:03		3:53		3:40	

FLX55RB Mainless Nozzle Performance Data—(Metric)

			 Green 102-6531 Plug 102-2208 Grey 102-2910		 Green 102-6531 Plug 102-2208 Green 102-6885		 Green 102-6531 Plug 102-2208 Red 102-2928		 Green 102-6531 Plug 102-2208 Beige 102-2929	
Bar	kPa	kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM	Radius	LPM
4,5	448	4,6	10,4	39,4	13,4	38,6	14,6	43,5	15,2	51,1
SOR			3:40		3:50		3:25		2:40	
5,5	552	5,6	11,3	43,9	13,4	43,2	14,6	48,8	15,2	56,8
SOR			3:15		3:25		3:00		2:30	

FLX55RB Mainless Nozzle Performance Data—(U.S.)

PSI	Radius	GPM	Radius	GPM	Radius	GPM	Radius	GPM
65	34	10.4	44	10.2	48	11.5	50	13.5
SOR	3:40		3:50		3:25		2:40	
80	37	11.6	44	11.4	48	12.9	50	15.0
SOR	3:15		3:25		3:00		2:30	

Requires the low-flow stator 102-6929 for indicated rotation speeds.
SOR: Speed of rotation

Back Nozzle Performance Data—(Metric)

Nozzles			4,5 Bar 448 kPa 4,6 kg/cm2		5,5 Bar 552 kPa 5,6 kg/cm2		
Part #	Description	Color	Radius - m	LPM	Radius - m	LPM	Profile
102-6937	Inner Nozzle with Yellow Restrictor	Yellow/Yellow	8,8	14,0	9,2	15,5	
102-6531	Inner Nozzle with White Restrictor	Green/White	9,5	16,3	10,1	17,4	
102-2135	Inner Nozzle with White Restrictor	White/White	7,6	15,5	7,9	17,0	
102-2136	Inner nozzle assy w/ yel restrictor	Yellow/Yellow	7,3	14,4	7,6	15,5	
102-6883	Intermediate Nozzle	Brown	11,6	10,6	11,6	10,6	
102-6884	Intermediate Nozzle	Yellow	12,5	15,5	13,1	17,0	
102-6885	Intermediate Nozzle	Green	12,8	20,4	13,7	22,7	
102-2925	Intermediate Nozzle	Blue	12,2	10,6	12,8	12,1	
102-2926	Intermediate Nozzle	Orange	13,4	16,3	13,7	18,2	
102-2927	Intermediate Nozzle	Gray	14,0	19,3	14,3	20,4	
102-2928	Intermediate Nozzle	Red	14,6	24,6	15,3	26,5	
102-2929	Intermediate Nozzle	Beige	15,6	30,7	16,2	34,4	

Back Nozzle Performance Data—(U.S.)

Nozzles			65 PSI		80 PSI		
Part #	Description	Color	Radius	GPM	Radius	GPM	Profile
102-6937	Inner Nozzle w/ Yellow Restrictor	Yellow/Yellow	29	3.7	30	4.1	
102-6531	Inner Nozzle w/ White Restrictor	Green/White	31	4.3	33	4.6	
102-6883	Intermediate Nozzle	Brown	38	2.8	38	2.8	
102-6884	Intermediate Nozzle	Yellow	41	4.1	43	4.5	
102-6885	Intermediate Nozzle	Green	42	5.4	45	6.0	
102-2925	Intermediate Nozzle	Blue	40	2.8	42	3.2	
102-2926	Intermediate Nozzle	Orange	44	4.3	45	4.8	
102-2927	Intermediate Nozzle	Gray	46	5.1	47	5.4	
102-2928	Intermediate Nozzle	Red	48	6.5	50	7.0	
102-2929	Intermediate Nozzle	Beige	51	8.1	53	9.1	

T7 SERIES ROTORS

NEW

Learn more at **Toro.com**

The T7 Series sprinkler is built rugged to withstand the harsh golf course conditions. The low-flow version is perfect for shorter-radius golf course applications like tee tops, surrounds and perimeters. The T7 has been designed and tested to ensure the high reliability demanded by the market.

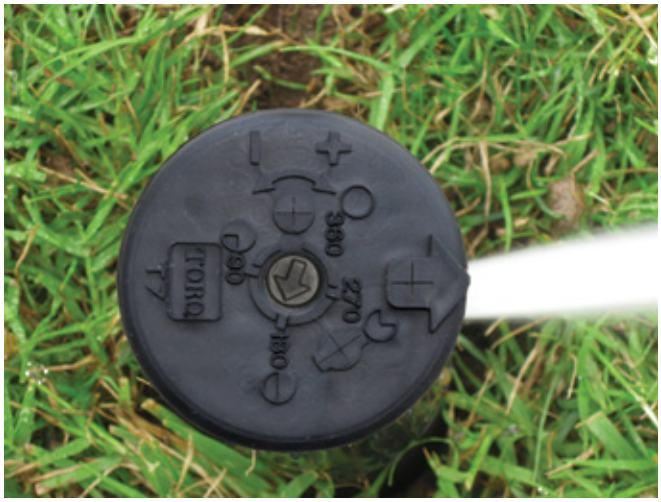
Features & Benefits | Specifications | Performance Data

Model Choices
- *Plastic or stainless steel models*
- *Low-Flow or High-Flow models*

T7 SERIES ROTORS

Features & Benefits

1. **Water is Evenly Distributed**
   High efficiency nozzles with single port design ensure water is evenly distributed across the pattern.
2. **Versatility**
   Available in standard and low-flow models to meet your application needs.
3. **Smart Arc™ Memory**
   Vandal and abuse resistant – the Smart Arc memory safely returns the sprinkler to previously set arc even when turned beyond arc borders.
4. **Clears Tall Grasses**
   The 14,61cm (5.75") pop-up ensures proper spray pattern and nozzle distribution uniformity even in taller grasses.



Top Arc Indication
Arc setting indicator on top of the rotor allows for easy wet or dry adjustments. Part or full-circle from 45° to 360°.

Operating Specifications

- Precipitation rate: 7,6 - 14,0mm (.30 -.55") per hour
- Radius: Low-flow models: 11,6 - 16,2m (38'-53')
- High-flow models: 14,0 - 25,0m (46'-83');
- Flow rate: Low-flow models: 6,4-49,2 LPM (1.7-13.0 GPM) High-flow models: 25,4-116 LPM (6.8-30.5 GPM)
- Operating pressure range: 2,8-7,0 Bar (40-100 psi)
- Inlet size: 25mm (1") threaded NPT or 25mm (1") BSP
- Nozzle trajectory: 25°
- Arc adjustment: 45°-335° and 360° (unidirectional at 360°)

Additional Features

- Standard check valve
- Radius reduction screw – up to 25%
- Threaded cap-retained riser assembly
- Variable reversing stator
- Two nozzle trees:
- Low flow: 6 nozzles (2, 3, 4.5, 6, 7.5 and 9)
- High flow: 7 nozzles (7, 9, 12, 16, 20, 24 and 27)
- Slip clutch
- Nozzle support/breakup screw
- Riser pull-up feature on top of nozzle base
- Adjustment/pull up tool supplied
- Locking cap screw

Options Available

- Stainless steel riser

Dimensions

- Pop-up height to nozzle: 127mm (5")
- Body height: 222mm (8.75")
- Rubber cover diameter: 57mm (2.25")
- Body diameter: 70mm (2.75")

Warranty

- Two years; Five years when installed with Toro Swing Joints

Specifying Information—T7 Sprinkler

T7PXX-XXXX			
Descrip.	**Optional**	**Thread**	**Optional**
T7P	SS	XX	L
T7P—Sports Rotor	SS—Stainless Steel Riser	02—NPT Thread 42—ACME 52—BSP	L—Low Flow
Example: A low flow T7P sprinkler with a stainless steel riser and ACME threads would be specified as T7PSS-42L			

T7 Sports Rotor Nozzle Performance Data - Low Flow—Metric

Nozzle	Pressure (Bar)	Flow (LPM)	Radius (m)	Precip mm/hr ■	Precip mm/hr ▲
2.0	2,8	6,5	12,2	2,78	3,17
	3,4	7,4	12,8	3,15	3,59
	4,1	8,2	12,8	3,32	3,78
	4,8	8,9	12,5	3,61	4,11
	5,5	9,6	12,8	3,88	4,43
	6,2	10,3	12,5	3,94	4,50
	6,9	10,9	12,5	4,19	4,78
3.0	2,8	9,2	12,5	3,91	4,46
	3,4	10,5	12,8	4,23	4,83
	4,1	11,7	12,5	4,51	5,14
	4,8	12,8	12,5	4,92	5,61
	5,5	13,8	12,8	5,05	5,76
	6,2	14,7	12,5	5,15	5,87
	6,9	15,4	13,1	5,37	6,12
4.5	2,8	15,4	11,6	6,89	7,86
	3,4	17,6	12,5	6,77	7,72
	4,1	19,6	12,5	7,52	8,58
	4,8	21,3	12,8	7,82	8,92
	5,5	23,0	12,8	8,43	9,61
	6,2	24,6	13,1	8,59	9,79
	6,9	26,0	13,1	9,10	10,38
6.0	2,8	18,6	13,1	6,51	7,42
	3,4	21,3	14,0	6,51	7,42
	4,1	23,7	14,6	6,66	7,59
	4,8	26,7	15,2	7,18	8,19
	5,5	27,9	14,9	7,51	8,56
	6,2	29,8	15,2	7,70	8,78
	6,9	31,7	15,2	8,19	9,34
7.5	2,8	21,9	13,4	7,30	8,33
	3,4	25,1	14,0	7,66	8,74
	4,1	27,9	14,6	7,82	8,92
	4,8	30,5	15,2	8,20	9,35
	5,5	33,0	15,5	8,54	9,74
	6,2	35,8	15,8	9,26	10,55
	6,9	37,4	15,8	8,95	10,20
9.0	2,8	27,7	13,7	8,85	10,10
	3,4	31,9	14,9	8,60	9,80
	4,1	35,5	15,5	8,83	10,07
	4,8	39,5	16,5	9,08	10,36
	5,5	42,7	16,8	9,11	10,39
	6,2	45,6	16,8	9,74	11,11
	6,9	48,2	17,1	9,94	11,33

Radius shown in meters. Data based on 360°.

T7 Sports Rotor Nozzle Performance Data - Low Flow—U.S.

Nozzle	Pressure (PSI)	Flow (GPM)	Radius (FT)	Precip (in/hr) ▲	Precip (in/hr) ■
2.0	40	1.73	40	0.25	0.22
	50	1.96	42	0.29	0.25
	60	2.17	42	0.30	0.26
	70	2.36	41	0.33	0.28
	80	2.54	42	0.35	0.31
	90	2.71	41	0.36	0.31
	100	2.88	41	0.38	0.33
3.0*	40	2.43	41	0.36	0.31
	50	2.77	42	0.39	0.33
	60	3.10	41	0.41	0.36
	70	3.38	41	0.45	0.39
	80	3.64	42	0.46	0.40
	90	3.89	41	0.47	0.41
	100	4.06	43	0.49	0.42
4.5	40	4.07	38	0.63	0.54
	50	4.65	41	0.62	0.53
	60	5.17	41	0.68	0.59
	70	5.64	42	0.71	0.62
	80	6.08	42	0.77	0.66
	90	6.49	43	0.78	0.68
	100	6.88	43	0.83	0.72
6.0	40	4.92	43	0.59	0.51
	50	5.63	46	0.59	0.51
	60	6.27	48	0.61	0.52
	70	7.05	50	0.65	0.57
	80	7.37	49	0.68	0.59
	90	7.87	50	0.70	0.61
	100	8.37	50	0.74	0.64
7.5	40	5.78	44	0.66	0.58
	50	6.63	46	0.70	0.60
	60	7.37	48	0.71	0.62
	70	8.05	50	0.75	0.65
	80	8.73	51	0.78	0.67
	90	9.46	52	0.84	0.73
	100	9.89	52	0.81	0.70
9.0	40	7.33	45	0.81	0.70
	50	8.44	49	0.78	0.68
	60	9.39	51	0.80	0.70
	70	10.43	54	0.83	0.72
	80	11.27	55	0.83	0.72
	90	12.05	55	0.89	0.77
	100	12.74	56	0.90	0.78

* Pre-installed nozzle
Data based on 180°

T7 Sports Rotor Nozzle Performance Data - High Flow—Metric

Nozzle	Pressure (Bar)	Flow (LPM)	Radius (m)	Precip mm/hr ■	Precip mm/hr ▲
7.0	2,8	25,8	14,1	7,87	8,97
	3,4	28,1	14,8	8,21	9,36
	4,1	30,7	14,9	8,60	9,81
	4,8	33,7	15,3	9,07	10,34
	5,5	36,6	15,8	9,09	10,37
	6,2	38,9	15,8	9,29	10,59
	6,9	41,1	16,3	9,10	10,37
9.0	2,8	28,5	14,4	8,35	9,52
	3,4	31,2	15,4	8,07	9,20
	4,1	33,7	15,3	8,38	9,55
	4,8	37,1	15,8	8,87	10,12
	5,5	39,7	16,4	8,80	10,04
	6,2	42,4	16,3	9,06	10,33
	6,9	44,8	16,5	9,23	10,52
12.0	2,8	37,7	15,3	9,74	11,10
	3,4	39,9	16,3	9,92	11,32
	4,1	43,6	17,3	10,04	11,45
	4,8	47,5	18,0	10,52	11,99
	5,5	51,1	18,2	10,92	12,45
	6,2	54,4	18,5	11,22	12,79
	6,9	57,5	19,2	11,43	13,03
16.0	2,8	50,8	16,0	11,68	13,32
	3,4	56,6	17,4	11,67	13,30
	4,1	59,8	18,3	11,48	13,09
	4,8	64,8	18,6	12,03	13,72
	5,5	69,7	19,4	12,10	13,80
	6,2	74,3	19,6	12,50	14,25
	6,9	78,7	20,0	12,82	14,62
20.0	2,8	61,0	15,8	14,02	15,99
	3,4	69,7	17,5	13,38	15,26
	4,1	74,1	18,6	13,29	15,16
	4,8	79,5	19,4	13,81	15,75
	5,5	85,5	20,2	13,07	14,90
	6,2	90,8	20,7	13,47	15,36
	6,9	95,7	21,4	13,78	15,71
24.0	2,8	58,5	16,4	13,99	15,95
	3,4	67,0	18,4	12,02	13,70
	4,1	74,8	19,4	12,18	13,88
	4,8	81,8	20,2	12,51	14,27
	5,5	88,2	20,8	12,69	14,47
	6,2	94,2	21,3	13,16	15,00
	6,9	99,6	22,0	12,76	14,55
27.0	2,8	73,3	16,8	15,66	17,86
	3,4	83,2	19,6	12,72	14,51
	4,1	90,2	21,6	11,56	13,18
	4,8	97,2	22,0	12,11	13,81
	5,5	103,5	22,3	12,55	14,31
	6,2	109,9	22,7	12,97	14,79
	6,9	115,5	22,9	13,27	15,13

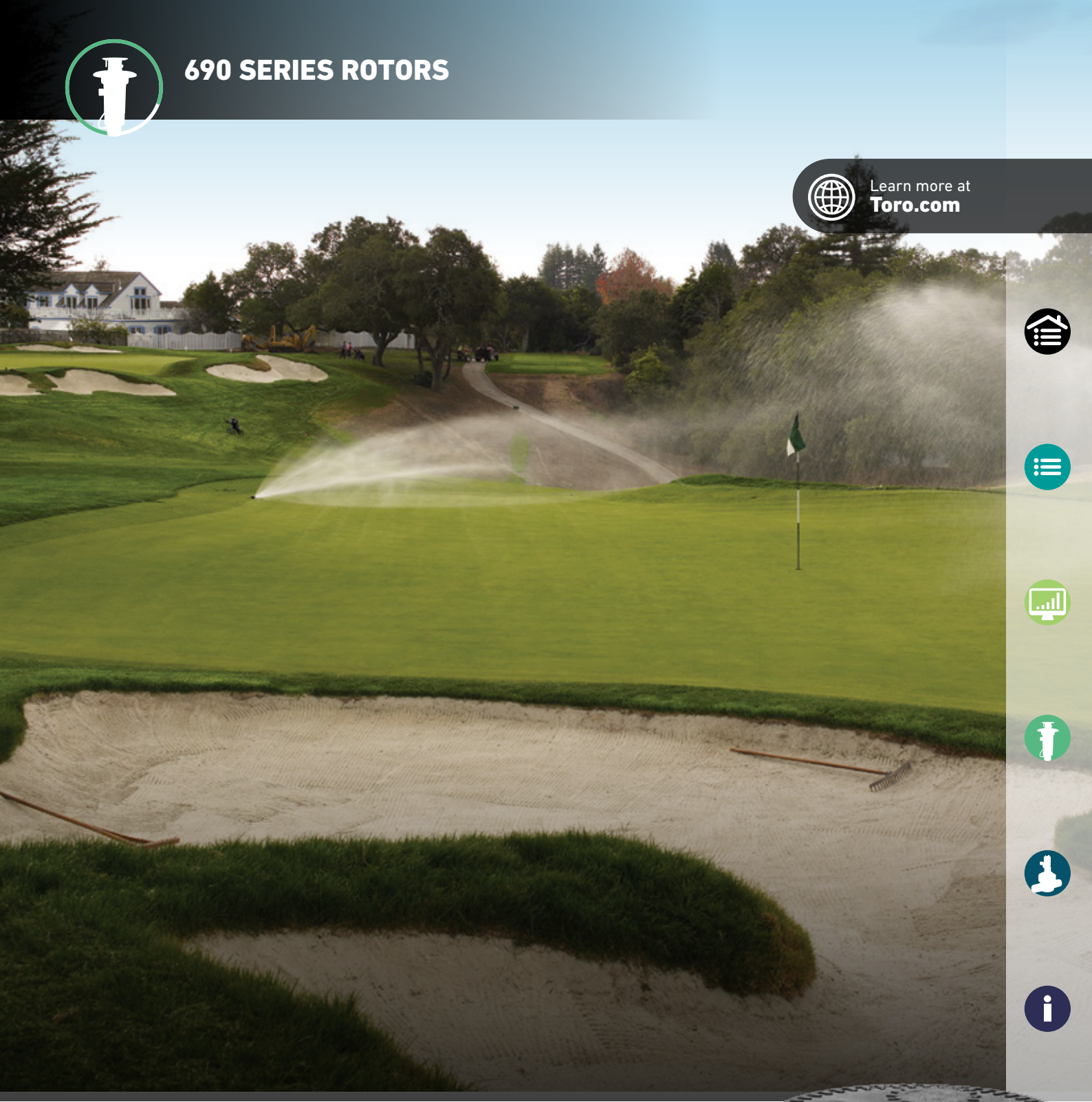
T7 Sports Rotor Nozzle Performance Data - High Flow—U.S.

Nozzle	Pressure (PSI)	Flow (GPM)	Radius (FT)	Precip (in/hr) ▲	Precip (in/hr) ■
7.0	40	6.81	46.3	0.715	0.620
	50	7.41	48.7	0.746	0.646
	60	8.10	49.0	0.782	0.677
	70	8.90	50.3	0.824	0.714
	80	9.67	52.0	0.827	0.716
	90	10.27	52.0	0.845	0.732
	100	10.85	53.3	0.827	0.716
9.0	40	7.54	47.3	0.759	0.657
	50	8.25	50.7	0.734	0.635
	60	8.91	50.3	0.762	0.660
	70	9.81	52.0	0.807	0.699
	80	10.49	53.7	0.800	0.693
	90	11.20	53.3	0.823	0.713
	100	11.83	54.0	0.839	0.727
12.0*	40	9.95	50.3	0.885	0.767
	50	10.55	53.3	0.902	0.781
	60	11.53	56.7	0.913	0.791
	70	12.54	59.0	0.956	0.828
	80	13.51	59.7	0.993	0.860
	90	14.38	60.7	1.020	0.883
	100	15.18	63.0	1.039	0.900
16.0	40	13.42	52.3	1.062	0.920
	50	14.96	57.0	1.061	0.919
	60	15.79	60.0	1.044	0.904
	70	17.13	61.0	1.094	0.948
	80	18.41	63.7	1.100	0.953
	90	19.64	64.3	1.136	0.984
	100	20.80	65.7	1.166	1.009
20.0	40	16.10	52.0	1.275	1.104
	50	18.40	57.3	1.216	1.053
	60	19.56	61.0	1.209	1.047
	70	21.01	63.7	1.256	1.087
	80	22.58	66.3	1.188	1.029
	90	23.99	68.0	1.225	1.061
	100	25.29	70.3	1.253	1.085
24.0	40	15.46	53.7	1.272	1.101
	50	17.69	60.3	1.093	0.946
	60	19.76	63.7	1.107	0.959
	70	21.61	66.3	1.138	0.985
	80	23.29	68.3	1.154	0.999
	90	24.87	70.0	1.196	1.036
	100	26.30	72.3	1.160	1.005
27.0	40	19.37	55.0	1.424	1.233
	50	21.98	64.3	1.157	1.002
	60	23.82	71.0	1.051	0.910
	70	25.67	72.3	1.101	0.954
	80	27.34	73.0	1.141	0.988
	90	29.03	74.3	1.179	1.021
	100	30.52	75.0	1.207	1.045

Radius shown in meters. Data based on 360°.

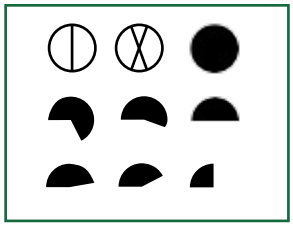
690 SERIES ROTORS

Learn more at
Toro.com



Features & Benefits | Specifications | Performance Data

For nearly 40 years the 690 Series has set the standard for durability and reliability in golf applications. Two 2-speed models provide a slower speed in the non-overlap areas and a faster speed in the overlap areas to provide a more balanced precipitation rate than traditional full circle sprinklers in these application which lowers system costs.



Fixed Arc Drives
Nine fixed arc drive assemblies ensure positive retention of the coverage area with no arc drift.

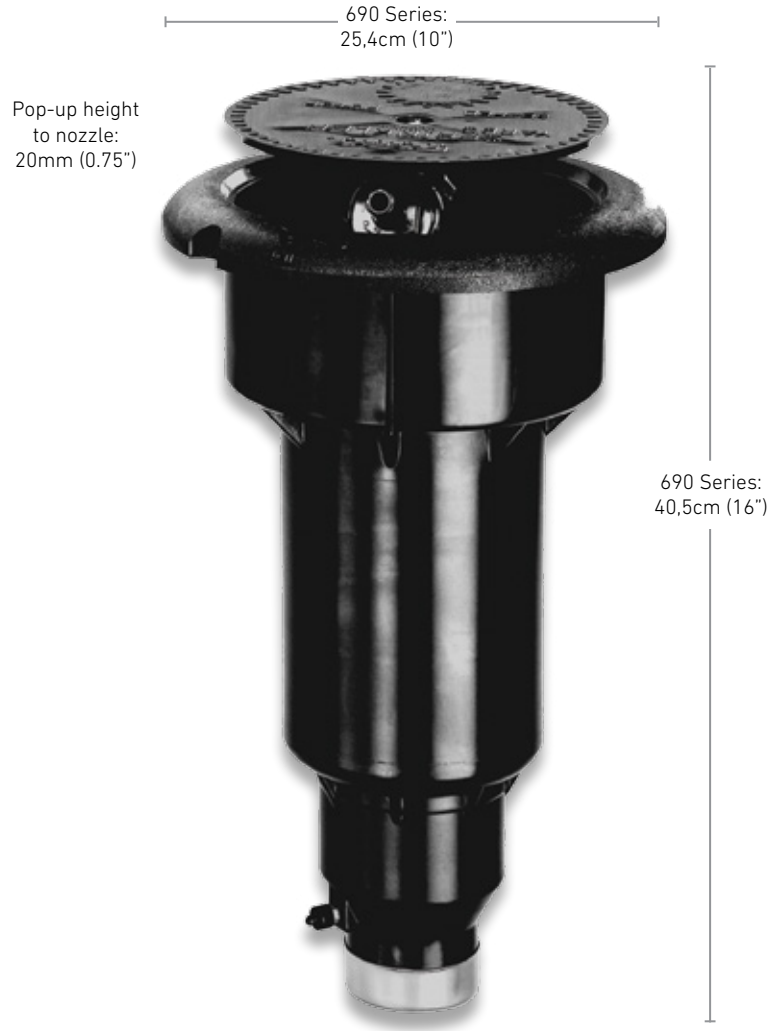
Features & Benefits

1. **696 2-Speed Models**
Used in single row applications these sprinklers operate at a slower speed over the 60 degree non-overlap area and a faster speed over the 120 degree overlapped areas to provide a balanced application rate.

2. **698 2-Speed Models**
Used in double row applications these sprinklers operate at a slower speed over the 180 degree non-overlap area and a faster speed over the 180 degree overlapped areas to provide a balanced application rate.

3. **Artificial Playing Surfaces**
Radius and flow capabilities are perfect for cooling and rinsing artificial playing surfaces.

4. **Electric Valve In Head Models**
Electric valve in head models provide individual head control that ensures run times can match differing soil, turf and terrain watering requirements, pressure regulation to ensure all nozzles perform at the same pressure and manual ON-OFF-Auto control at the head.



Weight:
FLX55-6: 2,5 kg (5.6 lbs)

690 SERIES ROTORS

Operating Specifications

- Inlet: 3,8cm (1.5") NPT
- Radius: 26,5 – 32,9m (87' – 108')
- Flow Rate: 193,0 – 311,2 LPM (51,0 – 82,2 GPM)
- Recommended Operating Pressure Range:
  - 5,5 – 7,0 Bar (80 – 100 psi)
  - Maximum pressure: 10,3 Bar psi (150 psi)
  - Minimum pressure: 2,8 Bar (40 psi)
- Electric Valve-In-Head Solenoid: 24V ac, 50/60 Hz
  - Inrush: 60 Hz; 0,30 Amps
  - Holding: 60 Hz; 0,20 Amps
- Check-O-Matic: Maintains 11,2m (37') of elevation

Additional Features

- Manual control at the sprinkler, On-Off-Auto (electric)
- Time-proven, gear-drive design
- All internal components serviceable from the top of the sprinkler
- Durable engineering plastic and stainless steel construction
- Nine arc selections

Dimensions

- Body diameter: 25,4cm (10")
- Body height: 40,5cm (16")
- Weight: 2,5 kg (5.6 lbs)
- Pop-up height to nozzle: 20mm (0.75")

Warranty

- Two years; Five years when installed with Toro Swing Joints

690 Series Performance Chart—(Metric)

Base Pressure			Nozzle Set 90		Nozzle Set 91		Nozzle Set 92	
Bar	kPa	Kg/cm²	Radius	LPM	Radius	LPM	Radius	LPM
5,5	550	5,61	26,5	193,0	29,3	231,3	30,5	280,1
6,9	690	7,04	27,4	216,1	30,5	278,2	32,9	311,2

Radius shown in meters.
Sprinkler radius of throw per ASAE standard S398.1.

690 Series Performance Chart—(U.S.)

Base Pressure	Nozzle Set 90		Nozzle Set 91		Nozzle Set 92	
psi	Radius	GPM	Radius	GPM	Radius	GPM
80	87	51.0	96	61.2	100	74.0
100	90	57.1	100	73.5	108	82.2

Radius shown in feet.
Sprinkler radius of throw per ASAE standard S398.1.

Specifying Information—690

69X-0X-XXX

Arc		*Valve-In-Head Type*	*Nozzle*	*Pressure Regulation**
69X		**0X**	**XX**	**X**
1—90° 2—180° 4—Full-circle 6—Full-circle, 2-speed (60°–120°) 8—Full-circle, 2-speed (180°–180°)	A—150° B—165° C—195° D—210°	1—Normally Open Hydraulic 2—Check-O-Matic 6—Electric	90 91 92	8—5,5 bar (80 psi) 1—6,,9 bar (100 psi)

Example: When specifying a 690 Series Sprinkler with a 180° arc, electric valve-in-head, #91 nozzle, and pressure regulation at 5,5 bar (80 psi), you would specify: 692-06-918

**Electric models only.*

590GF SERIES SPRAYS

Learn more at **Toro.com**

Flanged Cap
Flanged cap installs below grade to stabilize the body position and maintain optimum nozzle performance.

590GF-4 590GF-6 590GF-12

Features & Benefits Specifications

Toro's 590GF Series is the first spray head designed specifically for golf course irrigation with enhanced water management capabilities. The 590GF is built for the tough golf course environment, including harsh debris situations like top-dressing and sand, high water pressures, and daily mower and foot traffic. The 590GF is perfect around bunkers, on small tee boxes, and around the clubhouse. And with its patented X-Flow technology, the 590GF has a built-in shutoff device should a nozzle be damaged or removed and it's standard check valve feature minimizes low head drainage.

590GF SERIES SPRAYS

Features & Benefits

1. **Nozzle Options**
In additional to the full line of Toro MPR, T-VAN and specialty nozzles the 590GF accepts the revolutionary Precision™ Spray and Precision™ Rotating Series nozzles with optimized distribution uniformity that provides exceptional turf conditions with minimal water usage.

2. **Designed Flush Rate**
Sprinkler flushes during pop-up and retraction clearing debris from around the riser to eliminate stick-ups and ensure positive sealing and retraction.

3. **X-Flow® Shut Off Device**
The X-Flow shut off feature stops the flow of water if the nozzle is damaged or removed to eliminate flooding, water waste and soil erosion.

4. **Prevent Low Head Drainage**
The standard check valve prevents low head drainage with up to 3 meters (10') of elevation change minimizing soil erosion and water waste.

Specifications

Operating Specifications
- Radius: 0,6 – 7,9m (2' – 26')
- Recommended pressure range: 1,7 – 3,4 Bar (25-50 psi) maximum – 5,2 Bar (75 psi)
- Flow rate: 0,2 – 17,8LPM (0.05 – 4.71 GPM)
- 2 GPM flush rate

Additional Features
- Stainless steel retraction spring
- All bodies shipped with flush plug in place
- Ratcheting riser feature for arc adjustment

Dimensions
- Body diameter:
  - 34,9mm (1.375") on 4P and 6P
  - 41,275mm (1.625") on 12P
- Cap diameter: 50,8mm (2")
- Inlet: 12,7mm (0.5") female-threaded

Warranty
- Two years; Five years when installed with Toro Swing Joints

With X-Flow
Eliminates water waste, soil erosion and flooding

Without X-Flow
Water waste, soil erosion and flooding occur

Risers and Extenders

570-6X
- Male-inlet threads install onto any 590GF sprinkler or to provide a 15,2cm (6") extension
- Maximum pressure: 5,2 Bar (75 psi)

570SR-6 and 570SR-18 Risers
- 12,7mm (0.5") male-threaded inlet for installation on pipe fittings
- Maximum pressure: 5,2 Bar (75 psi)
- Height: 15,2cm and 45,7 (6" and 18")

Specifying Information— 590GF Series Sprays

69X-0X-XXX	
Model Number	*Description*
590GF-4 590GF-6 590GF-12	10,2cm (4") Pop-Up 15,2cm (6") Pop-Up 30,5cm (12") Pop-Up

PRECISION™ SERIES SPRAY NOZZLES

Learn more at **Toro.com**

Toro's Precision™ Series Spray Nozzles are the most complete and efficient spray nozzle line available to help irrigation professionals manage water use, eliminate runoff and reduce customer water bills. The Precision™ Series Spray Nozzles' 25mm/hr. (1"/hr.) precipitation rate ensures that water is applied more slowly and evenly without sacrificing landscape health. These nozzles are available in a wide selection of arcs and radii, as well as male and female threads, making them ideal for large scale installations and retrofits. The Precision™ Series Spray Nozzles are now pressure-compensating, further enhancing the best-in-class spray nozzle in the industry

Features & Benefits | Specifications | Performance Data

PSN with PCD Performs Under Pressure!

UP TO **33%** WATER SAVINGS

Pressure Compensation Device

The elastomeric PCD disk opens and closes in response to changes in inlet pressure to maintain optimal performance, when the pressure rises higher than 2,8 Bar (40 psi).

Features & Benefits

1. **Patented H²0 Chip Technology**
Using patented H²0 chip technology – and no moving parts – each Precision™ Series Spray Nozzle creates one or more high frequency oscillating streams to achieve the desired arc and radius with one-third less water usage.

2. **Maximize Irrigation Efficiency**
Precision™ Series Spray Nozzles deliver an industry first 25mm/hr (1"/hr) precipitation rate, which better matches soil infiltration rate. This lower precipitation rate, along with high distribution uniformity make this the most efficient nozzle family from 1,5-4,6m (5'-15').

3. **Third-Party Performance Validation**
Precision™ Series Spray Nozzles have been tested and validated in the field and at the Center for Irrigation Technology (CIT).

4. **Pressure-Compensating**
Pressure-Compensating Precision™ Series Spray Nozzles maintain 25mm/hr. (1"/hr) precipitation rate and minimize misting for inlet pressures of more than 2,8 Bar (40 PSI), minimizing the need for a regulating head, at a fraction of the cost.

5. **Design and Retrofit Effectiveness**
The lower flow rate of Precision™ Series Spray Nozzles maximizes design efficiency and saves on overall material costs by using fewer valves and less controller stations. In addition, existing systems with low pressure can be fixed with a simple retrofit of the existing high-flow nozzle.

*Based on internal flow rate test data in Riverside, CA.

Performance Data Pressure-Compensating Precision™ Series Spray Nozzles

1,5m (5') "O" Nozzle						2,4m (8') "O" Nozzle						3,0m (10') "O" Nozzle					
Arc	Bar	Radius (m)	Flow (lpm)	Precip Rate (mm/hr) ■	Precip Rate (mm/hr) ▲	Arc	Bar	Radius (m)	Flow (lpm)	Precip Rate (mm/hr) ■	Precip Rate (mm/hr) ▲	Arc	Bar	Radius (m)	Flow (lpm)	Precip Rate (mm/hr) ■	Precip Rate (mm/hr) ▲
5Q	2,1	1,28	0,21	22,17	25,60	8Q	2,1	2,40	0,52	20,88	24,11	10Q	2,1	2,95	0,76	19,56	22,58
	3,1	1,49	0,26	27,38	31,62		3,1	2,49	0,64	25,98	29,99		3,1	3,13	0,93	24,12	27,85
	4,1	1,72	0,33	33,90	39,15		4,1	2,56	0,76	30,56	35,29		4,1	3,21	1,09	28,03	32,37
5T	2,1	1,33	0,36	27,87	32,18	8T	2,1	2,25	0,71	21,39	24,70	10T	2,1	2,94	1,05	20,29	23,43
	3,1	1,55	0,44	34,23	39,52		3,1	2,49	0,88	26,74	30,88		3,1	3,13	1,30	25,18	29,08
	4,1	1,66	0,56	43,03	49,69		4,1	2,59	1,03	31,32	36,17		4,1	3,21	1,54	29,83	34,44
5H	2,1	1,22	0,39	20,21	23,34	8H	2,1	2,34	1,02	20,63	23,82	10H	2,1	2,93	1,53	19,72	22,77
	3,1	1,49	0,50	26,08	30,11		3,1	2,44	1,26	25,47	29,41		3,1	3,09	1,85	23,96	27,67
	4,1	1,66	0,62	31,94	36,89		4,1	2,48	1,49	30,05	34,70		4,1	3,18	2,16	27,87	32,18
5TT	2,1	1,29	0,64	24,94	28,79	8TT	2,1	2,26	1,36	20,63	23,82	10TT	2,1	2,89	2,06	19,92	23,01
	3,1	1,54	0,77	29,83	34,44		3,1	2,47	1,68	25,40	29,33		3,1	3,03	2,51	24,33	28,09
	4,1	1,65	0,95	36,67	42,35		4,1	2,59	1,98	29,99	34,63		4,1	3,14	2,93	28,36	32,75
5TQ	2,1	1,30	0,69	23,84	27,53	8TQ	2,1	2,31	1,43	19,14	22,10	10TQ	2,1	2,83	2,09	17,99	20,78
	3,1	1,55	0,85	29,05	33,54		3,1	2,47	1,80	24,22	27,96		3,1	3,06	2,68	22,98	26,53
	4,1	1,70	1,00	34,25	39,55		4,1	2,61	2,08	27,94	32,27		4,1	3,14	3,10	26,66	30,79
5F	2,1	1,28	0,82	21,19	24,47	8F	2,1	2,26	1,97	19,86	22,94	10F	2,1	2,98	3,08	19,88	22,96
	3,1	1,51	1,01	26,08	30,11		3,1	2,37	2,42	24,45	28,23		3,1	3,10	3,79	24,45	28,23
	4,1	1,68	1,19	30,64	35,38		4,1	2,45	2,80	28,27	32,64		4,1	3,19	4,38	28,28	32,65

3,7m (12') "O" Nozzle						4,6m (15') "O" Nozzle						Special Patterns					
Arc	Bar	Radius (m)	Flow (lpm)	Precip Rate (mm/hr) ■	Precip Rate (mm/hr) ▲	Arc	Bar	Radius (m)	Flow (lpm)	Precip Rate (mm/hr) ■	Precip Rate (mm/hr) ▲	Arc	Bar	Radius (m)	Flow (lpm)	Precip Rate (mm/hr) ■	Precip Rate (mm/hr) ▲
12Q	2,1	3,46	1,11	19,92	23,00	15Q	2,1	4,07	1,67	19,12	22,08	4X15 LCS	2,1	1,2 x 4,5	1,02	22,00	25,41
	3,1	3,72	1,36	24,45	28,23		3,1	4,42	2,09	24,05	27,77		2,8	1,2 x 4,5	1,17	25,26	29,17
	4,1	3,80	1,63	29,20	33,72		4,1	4,52	2,44	27,96	32,29	4X15 RCS	3,5	1,2 x 4,5	1,21	26,08	30,11
12T	2,1	3,36	1,44	19,35	22,35	15T	2,1	4,30	2,20	18,91	21,83		4,1	1,2 x 4,5	1,25	26,89	31,05
	3,1	3,45	1,75	23,60	27,25		3,1	4,47	2,69	23,14	26,72		2,1	1,2 x 9,0	2,12	22,82	26,35
	4,1	3,67	2,06	27,67	31,96		4,1	4,65	3,12	26,84	30,99	4X30 SST	2,8	1,2 x 9,0	2,42	26,08	30,11
12H	2,1	3,25	2,11	18,90	21,83	15H	2,1	4,03	3,43	19,70	22,75		3,5	1,2 x 9,0	2,50	26,89	31,05
	3,1	3,69	2,60	23,32	26,92		3,1	4,18	4,23	24,27	28,02		4,1	1,2 x 9,0	2,57	27,71	31,99
	4,1	3,72	3,02	27,05	31,24		4,1	4,27	4,87	27,96	32,29	4X9 LCS	2,1	1,2 x 2,7	0,61	24,45	28,23
12TT	2,1	3,34	3,10	20,88	24,11	15TT	2,1	4,27	4,48	19,29	22,27		2,8	1,2 x 2,7	0,68	27,50	31,76
	3,1	3,41	3,80	25,55	29,50		3,1	4,43	5,49	23,63	27,29	4X9 RCS	3,5	1,2 x 2,7	0,72	29,03	33,52
	4,1	3,51	4,39	29,54	34,11		4,1	4,58	6,36	27,38	31,62		4,1	1,2 x 2,7	0,72	29,03	33,52
12TQ	2,1	3,34	3,27	19,49	22,51	15TQ	2,1	4,08	4,82	18,40	21,25		2,1	1,2 x 5,4	1,29	25,98	29,99
	3,1	3,52	4,01	23,93	27,64		3,1	4,31	5,91	22,54	26,03	4X18 SST	2,8	1,2 x 5,4	1,36	27,50	31,76
	4,1	3,65	4,64	27,70	31,98		4,1	4,49	6,81	26,01	30,04		3,5	1,2 x 5,4	1,44	29,03	33,52
12F	2,1	3,27	4,38	19,64	22,68	15F	2,1	4,00	6,78	19,45	22,46		4,1	1,2 x 5,4	1,44	29,03	33,52
	3,1	3,63	5,36	24,05	27,77		3,1	4,16	8,25	23,69	27,35						
	4,1	3,70	6,18	27,73	32,02		4,1	4,22	9,55	27,42	31,66						

For low pressures (< 2,8 Bar) or designs requiring non-standard Arcs (60°, 150°, 210°), non-pressure compensating versions of the Precision™ Series Spray nozzles are available by special order. Contact Toro or your local Distributor/Dealer for information.

PRECISION™ SERIES SPRAY NOZZLES

Operating Specifications
- Radius: 1,5-4,6m (5'-15')
- Operating Pressure Range: 1,4-5,2 Bar (20-75 psi)
- Arc Options: 90°, 120°, 180°, 240°, 270°, 360°
- Side & Corner Specialty Patterns
- Fit Toro® or Irritrol®, Rain Bird® and Hunter® Spray Bodies

Specifications
Operating Specifications (with PCD)
- Radius: 1,5-4,6m (5'-15')
- Operating pressure range: 2,8-5,2 Bar (40-75 psi)
- Recommended Pressure: 3,5 Bar (50 psi)
- Flow Rate: 0,2-9,6 LPM (0.06-2.4 GPM)
- Nozzle trajectory:
  - 1,5m (5'): 5°
  - 2,4m (8'): 10°
  - 3,0m (10'): 15°
  - 3,7m (12'): 20°
  - 4,6m (15'): 27°
  - Corner and Side Strips: 20°

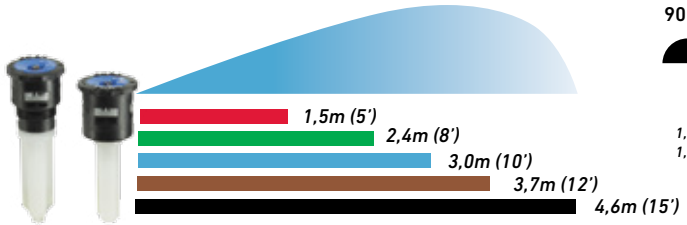
Additional Features
- Radius reduction 25% maximum
- Color coded for radius on top of the nozzle
- Precipitation rate ≤ 25mm/hour (≤ 1"/hour)
- Maintains precipitation rate as radius is reduced up to max of 25%
- Matched precipitation rate within radius families
- Matched precipitation rates between radius families
- Screen attached to nozzle for easy insertion into the spray body
- Works on all spray bodies

Warranty
- Two years

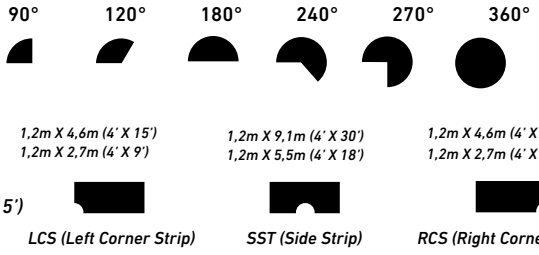
Pressure-Compensating Precision™ Series Nozzle Model List

1,5m (5') "O" Nozzle			2,4m (8') "O" Nozzle			3,0m (10') "O" Nozzle		
Male	Female	Description	Male	Female	Description	Male	Female	Description
O-T-5-QP	O-5-QP	90° Arc	O-T-8-QP	O-8-QP	90° Arc	O-T-10-QP	O-10-QP	90° Arc
O-T-5-TP	O-5-TP	120° Arc	O-T-8-TP	O-8-TP	120° Arc	O-T-10-TP	O-10-TP	120° Arc
O-T-5-HP	O-5-HP	180° Arc	O-T-8-HP	O-8-HP	180° Arc	O-T-10-HP	O-10-HP	180° Arc
O-T-5-TTP	O-5-TTP	240° Arc	O-T-8-TTP	O-8-TTP	240° Arc	O-T-10-TTP	O-10-TTP	240° Arc
O-T-5-TQP	O-5-TQP	270° Arc	O-T-8-TQP	O-8-TQP	270° Arc	O-T-10-TQP	O-10-TQP	270° Arc
O-T-5-FP	O-5-FP	360° Arc	O-T-8-FP	O-8-FP	360° Arc	O-T-10-FP	O-10-FP	360° Arc
3,7m (12') "O" Nozzle			**4,6m (15') "O" Nozzle**			**Special Patterns**		
Male	Female	Description	Male	Female	Description	Male	Female	Description
O-T-12-QP	O-12-QP	90° Arc	O-T-15-QP	O-15-QP	90° Arc	O-T-4X9-RCSP	O-4X9-RCSP	Right Corner
O-T-12-TP	O-12-TP	120° Arc	O-T-15-TP	O-15-TP	120° Arc	O-T-4X9-LCSP	O-4X9-LCSP	Left Corner
O-T-12-HP	O-12-HP	180° Arc	O-T-15-HP	O-15-HP	180° Arc	O-T-4X18-SSTP	O-4X18-SSTP	Side Strip
O-T-12-TTP	O-12-TTP	240° Arc	O-T-15-TTP	O-15-TTP	240° Arc	O-T-4X15-RCSP	O-4X15-RCSP	Right Corner
O-T-12-TQ	O-12-TQP	270° Arc	O-T-15-TQP	O-15-TQP	270° Arc	O-T-4X15-LCSP	O-4X15-LCSP	Left Corner
O-T-12-FP	O-12-FP	360° Arc	O-T-15-FP	O-15-FP	360° Arc	O-T-4X30-SSTP	O-4X30-SSTP	Side Strip

5 Radii Available in Male or Female Threads



6 Arcs Plus Side and Corner Strips Available



Specifying Information—Precision™ Series Spray Nozzles

O-X-XXXX-XXXP

Nozzle	Thread	Radius		Arc		PCD
O	X	XXXX		XXX		P
O—1" Per Hour	T—Toro Male Threaded Nozzle Blank—Female Threaded Nozzle	5— 1,5m (5') 8— 2,4m (8') 10— 3,0m (10') 12— 3,7m (12') 15— 4,6m (15')	4X15— 1,2mX4,6m* (4'X15') 4X30— 1,2mX9,1m* (4'X30') 4X9— 1,2mX2,7m (4'X9') 4X18— 1,2mX5,5m (4'X18')	Q—90° T—120° H—180°	TT—240° TQ—270° F—360° LCS—Left Corner RCS—Right Corner SST—Side Strip*	P—Pressure Compensating	

Example: A female threaded Precision Series Spray with a spray radius of 3,7m (12') and a 90° arc would be specified as: O-12-QP
Example 2: A male threaded Precision Series Spray with a spray radius of 3,0m (10') and a 180° arc would be specified as: O-T-10-HP

PRECISION™ SERIES ROTATING NOZZLES

Learn more at **Toro.com**

Precision Series Rotating Nozzles supply matched precipitation with any arc and any radius from 4,3m-7,9m (14 to 26'). Water is applied slowly and evenly to reduce runoff and wasted water.

Based off the design of the world's leading gear-driven rotor for golf applications, the Precision Series Rotating Nozzle is powered by a proven gear drive and delivers wind resistant, multi-stream, multi-trajectory patterns.

Steps

Features & Benefits | Specifications | Performance Data

Water Management Highlight

Air Relief Valve
Opens at the end of every watering cycle allowing clean air to enter the system and eliminate emitter clogging from siphoning.

Step-Up™ Technology

Step-Up™ Technology is designed to deliver high uniformity with matched precipitation for in-close watering all the way out to the furthest radius point. The unique "steps" create 15 streams, each designed to cover an area of the pattern.

Features & Benefits

1. **Gear-Driven**
Utilizes a proven planetary gear drive, variable stator and turbine to rotate the nozzle.

2. **Fewer Models**
Only two male-threaded nozzles and two female-threaded nozzles are required to cover radius range from 4,3m-7,9m (14-26') and arc range from 45-360°.

3. **Matched Precipitation Rate of 14 mm/hr. (0.55"/hr.)**
These nozzles deliver water more slowly and evenly than standard spray nozzles. The precipitation rate of 14 mm/hr. (0.55"/hr.) helps prevent excess run times often set to stay within watering windows.

4. **Consistent Speed of Rotation**
The gear drive mechanism delivers a consistent speed of rotation regardless of system pressure and prevents product stalling at low pressure.

Female-threaded PRN-F

Male-threaded PRN-TF

PRN Adjustment Tool

Female-threaded PRN-A

Male-threaded PRN-TA

PRECISION™ SERIES ROTATING NOZZLES

PRN Visual Arc Adjustment

The unique adjustment method allows for pre-setting of arc by hand or tool before the nozzle is installed. Visual indicators allow the user to quickly adjust the arc pattern to the desired arc from 45-270°. The adjustment band can be adjusted by hand or with the pre-included tool. The tool can be ordered separately as: PRNTOOL

Performance Data Precision™ Series Rotating Nozzles—Metric

Arc	Bar	LPM	Radius	Precip Rate (mm/hr) ■	Precip Rate (mm/hr) ▲	Rotation
45°	1,7	0,64	4,3	17,0	19,59	19,0
	2,1	0,87	4,6	20,0	23,09	17,0
	2,4	0,79	4,9	16,0	18,53	16,0
	3,1	1,06	5,5	16,9	19,52	15,0
	3,8	1,25	5,8	17,9	20,65	14,0
	4,5	1,48	6,7	15,8	18,20	14,0
	5,2	1,63	6,7	17,4	20,07	13,0
90°	1,7	1,63	4,9	16,4	18,97	14,0
	2,1	1,70	5,2	15,2	17,58	13,0
	2,4	2,04	5,8	14,6	16,89	13,0
	3,1	2,65	6,7	14,1	16,33	13,0
	3,8	2,99	7,0	14,6	16,87	13,0
	4,5	3,22	7,6	13,3	15,36	12,0
	5,2	3,48	7,6	14,4	16,62	12,0
120°	1,7	1,82	5,0	13,1	15,12	14,0
	2,1	2,23	5,2	15,0	17,29	12,0
	2,4	2,38	5,6	13,5	15,59	12,0
	3,1	3,48	6,7	13,9	16,10	12,0
	3,8	3,86	7,0	14,1	16,33	11,0
	4,5	4,20	7,3	14,1	16,32	11,0
	5,2	4,47	7,6	13,8	15,99	11,0
180°	1,7	3,14	4,6	18,0	20,83	12,0
	2,1	3,44	5,2	15,4	17,78	12,0
	2,4	4,01	5,8	14,4	16,58	12,0
	3,1	5,22	6,7	13,9	16,10	12,0
	3,8	5,83	7,0	14,2	16,44	11,0
	4,5	6,36	7,6	13,1	15,18	11,0
	5,2	6,85	7,9	13,1	15,12	10,0
240°	1,7	4,24	4,6	18,3	21,08	12,0
	2,1	4,58	4,9	17,3	20,02	12,0
	2,4	5,38	5,8	14,4	16,66	12,0
	3,1	6,47	6,4	14,2	16,42	12,0
	3,8	7,15	6,7	14,3	16,54	12,0
	4,5	7,61	7,0	13,9	16,09	11,0
	5,2	8,33	7,3	14,0	16,18	10,0
270°	1,7	4,09	4,3	17,9	20,69	11,0
	2,1	4,88	4,6	18,6	21,53	11,0
	2,4	5,19	5,5	13,7	15,88	11,0
	3,1	7,08	6,4	13,8	15,92	10,0
	3,8	8,06	6,7	14,3	16,52	10,0
	4,5	8,90	7,3	13,3	15,32	10,0
	5,2	9,84	7,6	13,5	15,62	10,0
360°	1,7	6,85	4,6	19,7	22,71	13,0
	2,1	8,18	5,5	16,3	18,82	13,0
	2,4	8,25	5,9	14,2	16,35	13,0
	3,1	11,13	6,8	14,3	16,54	13,0
	3,8	12,26	7,1	14,6	16,85	11,0
	4,5	13,17	7,4	14,4	16,64	11,0
	5,2	13,93	7,8	13,7	15,85	11,0

Specifications

Operating Specifications

- Radius: 4,3-7,9m (14'-26')
- Operating pressure range: 1,4-5,2 Bar (20-75 psi)
- Recommended Pressure: 2,8-3,5 Bar (40-50 psi)
- Flow Rate: 1,4-14 LPM (0.17-3.68 GPM)

Additional Features

- 15 unique streams with different trajectories
- Maximum height of 20° trajectory to fight through wind
- Threads onto nearly all sprayheads and shrub adapters (male or female)
- Pre-attached screen for easy installation
- Radius reduction up to 25% by turning set screw 90°
- Color coded to identify adjustable or full circle
- Precipitation rate = 14 mm/hr. (0.55"/hr.) on square spacing plans
- Maintains precipitation rate as radius is reduced
- Matched precipitation from 4,3-7,9m (14-26')
- Matched precipitation from 1,4-5,2 Bar (20-75 psi)
- Adjustable by hand or with included tool
- Consistent speed of rotation not affected by pressure

Warranty

- Five years

Precision Series Rotating Nozzle Model List	
Male Threaded	**Description**
PRN-TA	Toro Threaded, 4,3-7,9m (14-26'), Adjustable from 45°-270°
PRN-TF	Toro Threaded, 4,3-7,9m (14-26'), Full-Circle
Female Threaded	**Description**
PRN-A	Female Threaded, 4,3-7,9m (14-26'), Adjustable from 45°-270°
PRN-F	Female Threaded, 4,3-7,9m (14-26'), Full-Circle

Specification Note:
Proper system flush prior to installation and primary filtration of 100 mesh is necessary to ensure reliable operation of this product.

Specifying Information—Precision Series Rotating Nozzle

PRN-XX		
Model	**Thread**	**Model**
PRN	X	X
PRN—Precision Rotating Nozzle	T—Male Thread Blank—Female Thread	A—Adjustable arc F—Full-circle
Example: A male threaded Precision Series Rotating nozzle with a 7,3m (24') radius and a 180° arc would be specified as: PRN-TA A female threaded Precision Series Rotating nozzle with a 6,1m (20') radius and 360° arc would be specified as: PRN-F		

DL2000® SUBSURFACE DRIP

Learn more at **Toro.com**

Subsurface irrigation provides water directly to the root zone to ensure maximum utilization, minimizing the waste from evaporation and surface runoff. These kits provide everything you need to set up a tee box, bunker system, lake perimeter or anywhere else a low volume subsurface system applies.

Features & Benefits | Specifications

Air Relief Valve
Opens at the end of every watering cycle allowing clean air to enter the system and eliminate emitter clogging from siphoning.

DL2000® SUBSURFACE DRIP

Drip System Specifications-Bunkers Only

- Flow range:
  - Low flow: 0,4 to 30,3 LPM (0.1 to 8.0 GPM)
  - High flow: 7,6 to 75,7 LPM (2.0 to 20.0 GPM)
- DL2000 range:
  - Low flow: 3,7m to 304,8m (12' to 1000')
  - High flow: 76,2m to 762m (250' to 2500')
- Pressure compensating emitter: 1,9 LPH (0.5 GPH)
- DL2000 Maximum run length: 76,2m (250')
- Application rate 30,48cm x 30,48cm (12" x 12") spacing: 21mm/h (0.85"/h)

Benefits On Bunkers

- Uniformly applies water to areas such as fingers
- Minimizes runoff
- Eliminates overspray into bunker keeping sand dry
- Cycle/soak allows for application on steep slopes
- Reduces bunker cave-ins
- Saves time, labor and money by eliminating the need for hand-watering

Benefits On Trees

- Applies water directly to the root zone allowing turf to stay dry
- Water is applied precisely to the tee box without watering the surrounding area

Bunker System Components

- DL2000 subsurface dripline
- Drip Zone Valve Kit – includes control valve, pressure regulator, Y-filter and manual ball valve
- Air Vent Assembly – pre-assembled and ready to install (bunker only)
- Required inlet/outlet fittings
- Flush Assembly Fittings (8 GPM) 2 psi sealing flush valve (bunker only)
- Installation Fittings:
  - Includes Loc-Eze® tees, couplings, elbows and end clamps
  - 3,0m (10') of Blue Stripe® polyethylene tubing
  - Soil staples for secure tubing placement
- Pipe thread tape

Warranty

- 2 Years

Specifying Information—DL2000®

Model Number	Description
SSDS-LF-500	DL2000 500' Subsurface Drip System—Low Flow
SSDS-HF-1000	DL2000 1000' Subsurface Drip System—High Flow
RGP-212-05	DL2000 500' (Roll, 1,9 lph), 12" Spacing

SWING JOINTS

Learn more at
Toro.com

Features & Benefits | Specifications

Toro offers a full line of swing joints that cover all Golf sprinkler thread types.

Swing joints provide the flexibility to align the sprinkler to proper grade and level positioning to ensure optimum water use through maximum nozzle distribution uniformity.

Durability And Reliability
Constructed from schedule 80 PVC for durability and provide double o-ring seals on all swing fittings to ensure a lifetime of reliability and leak free performance.

SWING JOINTS

3,18cm (1.25") Female ACME x 2,54cm (1") Male ACME Adapter

Allows you to upgrade existing Rain Bird® Eagle 700 3,18cm (1.25") sprinklers to any Toro 800S or DT Series Sprinkler. P/N TA36-132

Additional Features

- Schedule 80 PVC construction
- Double o-ring swivel joints
- Low friction loss characteristics
- 21,7 bar (315 psi) pressure rating
- 65,7 bar (800 psi) burst pressure safety rating
- 2,54, 3,18 and 3,81cm (1", 1.25" and 1.5") models
- Standard models with 2X90 outlet configuration
- Ultra models with 4X90 outlet for maximum alignment flexibility
- 2 inlet fittings styles; ACME and BSP
- 2 outlet fitting styles; ACME and BSP
- 30,48, 40,64 and 45,72 cm (12", 16" and 18") lay lengths
- Quick coupler models w/ Dura-lock anti-rotation feature
- Compatible with all brands of service and saddle tees

Warranty

- Five years
- Toro Golf sprinkler warranty extended to 5 years when purchased and installed with a Toro Swing Joint.

Toro Tool Tip:

Use a 3,18cm (1.25") hole saw for the 2,54cm (1") Saddle Tee.

Use a 3,81cm (1.5") hole saw for the 3,18 (1.25") and 3,81cm (1.5") Saddles.

2,54, 3,18 and 3,81cm (1", 1.25" and 1.5")

Standard 2x90 and Ultra 4x90

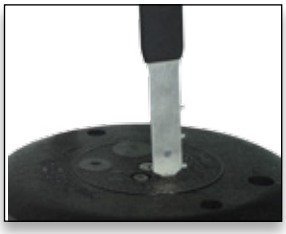
Quick Coupler

Glue tees, Saddle tees

Specifying Information—Toro Swing Joint

TSJ-XXXXXX-XX-X-XXX							
Description	*Inlet Size*	*Inlet Type*	*Size*	*Length*	*Number of Elbows*	*Outlet Size*	*Outlet Type*
TSJ	XX	XX	XX	XX	X	XX	X
TSJ—Toro Swing Joint	10—2,54cm (1") 12—3,18cm (1.25") 15— 3,8cm (1.5")	M—MIPT (male pipe thread) S—10,16cm (4") Spigot A—ACME thread GE—Glue elow GT—Glue Tee ST—Saddle Tee	Blank—same as inlet size 10—2,54cm (1") 12—3,18cm (1.25") 15—3,8cm (1.5")	12—30,48cm (12") Lay Length 18—45,72cm (18") Lay Length	3—Standard Unibody 4—Standard Unibody for Saddle Tees 5—Ultra Unibody 6—Ultra Unibody for Saddle Tees	10—2,54cm (1") 15— 3,8cm (1.5")	M—MIPT (Male pipe thread) A—ACME thread QC—Quick Coupler
Example: A Toro 3,18cm (1.25") Swing Joint with an 3,18cm (1.25") ACME inlet, 30,48cm (12") lay length, 3 elbows (standard uni-body) and 2,54cm (1") ACME outlet fitting would be specified as: **TSJ-12A-12-3-10A**							

995-15 Selector tool
- All electric golf sprinklers
- Allows user to manually turn the sprinkler "ON", turn or leave it "OFF" or place it into the "AUTO" position awaiting a command from the controller

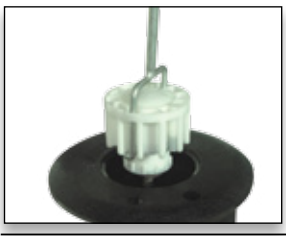


995-83 Multi Purpose tool
- All Golf sprinklers
- Riser pull up for INFINITY, FLEX800, DT and 800S Series
- Riser screen removal on all models.
- Upper snap ring remover on all models

PNOZZTOOL
Riser Pull Up Tool
- Used on all 570Z and 590G sprays

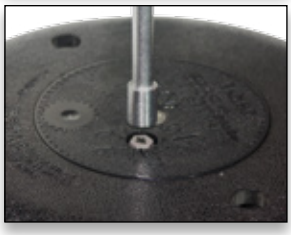
Riser Removal Tools
- **995-06** drive assembly extraction tool 630, 650 and 690 models
  - Threads into the nozzle base and allows removal of the drive from the body
- **995-85** drive assembly extraction tool 730,750,760,780,860S,880S
  - Threads onto the drive output shaft and allows removal of the drive from the body

995-82 Arc adjustment tool, 2,38mm (.0938") Allen Wrench
- 765,785,865S,885S Arc adjustment of the part circle drives
- INFINITY, FLEX800, DT Serie. Adjustment of the radius reduction screw

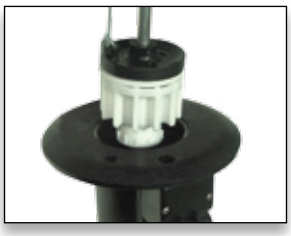


Valve Removal Tools
- **995-08** All 2,5cm (1") golf models and 640
- **995-09** All 3,8cm (1.5") models and 690.

Nut Drivers
- **995-105** 7,9mm (.3125") INFINITY, FLEX800, DT and 800S Series TruJectory adjustment on INFX5-6/ FLX5-6 models
  - Inner, intermediate and back nozzle removal on all DT and 800S models
- **995-99** 15,9mm (.625") nut driver
  - Series Dual trajectory selection
  - Main nozzle removal on all models
- **995-79** 11,1mm (.4375") 834S/854S pre August 2007
  - Inner, intermediate and back nozzle removal
  - 650/760/780/860S/880S Inner, intermediate and back nozzle removal
- **995-81** 14,3mm (.5625") 760/780 Series Main nozzle removal
- **995-80** 12,7mm (.5") 760/780/860S/880S Nozzle base jam nut removal
- **995-52** 6,4mm (.25") 660/680 Drive plate nut removal
- **995-53** 9,5mm (.375") 660/680 Cap nut removal



Valve Insertion Tools
Aligns and Installs Valve into the Body
- **995-xx** 640 VIH body
- **995-76** all 2,5cm (1") golf models
- **995-101** all 3,8cm (1.5") golf models
- **995-12** 690 body
- **995-20** 690 w/ rubber cover
- **118-1843** INF50 models
- **118-1844** INF30 models



995-100 Valve snap ring pliers with screen remover
- All Golf sprinklers Lower snap ring removal on all models
- Rock screen removal on all INFITNITY, FLEX800, DT and 800S Series
- Valve removal on all models

Riser Hold Up Tools
Allow for Nozzle Servicing
- **118-0954** Riser hold up tool, red
- **995-55** all 700 models
- **995-102** Universal hold up tool, all 700, 800S DT, INFINITY and FLEX800 models

Learn more at **Toro.com**

VALVES

va

Valves and Valve Boxes Comparison Charts

220g

220G Brass Series Valves

P220g

P220G Series Valves

vb

Valve Boxes

db

Dry Boxes

470

470 Quick Coupler Valves

Valve Comparison Chart

	Model	220G Series	P220G Series
	Page Number	108	111
	Flow Range	19-681 LPM (5.0-180 GPM)	19-1136 LPM (5.0-300 GPM)
	Operating Pressure	0,7-15,2 Bar (10-220 PSI Max)	0,7-15,2 Bar (10-220 PSI Max)
Conditions	Electrically Activated Systems	X	X
	Pressure Regulated Systems	X	X
Sizes	25 mm (1")	X	X
	40 mm (1.5")	X	X
	50 mm (2")	X	X
Configurations	Angle	X	X
	Inline/Globe	X	X
Inlet/Outlet	Threaded (Female)	X	X
Features	Manual Flow Control	X	X
	Pressure Regulation	X	X
	Internal Manual Bleed	X	X
	External Manual Bleed (Flush)	X	X
Body Construction	Glass-filled Nylon		X
	Brass	X	
Warranty		2 Years	2 Years

220G BRASS SERIES VALVES

Learn more at **Toro.com**

Features & Benefits | Specifications

The 220G Brass Series

Valves that provide extra durability in the most challenging environments on the course. With precise pressure regulation the optimum operating pressure and exact flow requirements are delivered to every sprinkler ensuring maximum efficiency and uniformity.

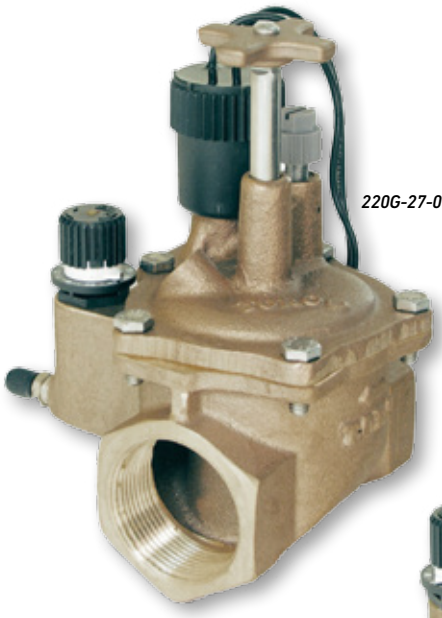
Features & Benefits

1. **EZReg® Pressure Regulating System**
Can be adjusted from 0,3-6,9 Bar (5-100 PSI) to provide the optimum operating pressure for every zone.

2. **Spike Guard™ Solenoid**
With 20,000 volt lightning rating, it virtually eliminates the need for solenoid replacements. And with half the amperage draw of traditional solenoids you can run twice as many valves simultaneously, reduce the cost of wire during installation or increase the distance from controller to valve.

3. **Internal Manual Bleed**
Ensures the optimum pressure of the system even when being operated manually.

4. **Self Flushing And Serviceable Filter**
A 120 mesh stainless steel screen in the flow of water is continually being cleaned any time the valve is in operation. Serviceable from the side of the valve the filter can be removed without disassembly.



220G-27-06

220G-27-04

4

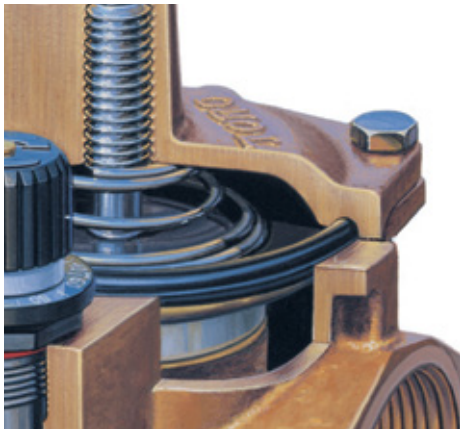
220G BRASS SERIES VALVES

Valve Wire Sizing Chart

*Maximum One-way Distance (in ft.) Between Controller and Valve Using Spike-Guard™ Solenoid**

Ground Wire	Control Wire						
	18	16	14	12	10	8	6
18	2040	2520	2940	3280	3540	3720	3860
16	2520	3260	4000	4660	5220	5620	5920
14	2940	4000	5180	6360	7420	8300	8960
12	3280	4660	6360	8240	10100	11800	13180
10	3540	5220	7420	10100	13180	16060	18770
8	3720	5260	8300	11800	16060	20800	25540
6	3860	5960	8960	13180	18700	25540	33080

* Solenoid Model: 24 V ac
Pressure: 10,3 Bar (150 psi)
Voltage Drop: 4 V
Minimum Operating Voltage: 20 V
Amperage (peak) 0.12 A



Fabric Reinforced Diaphragm Provides superior performance and extended life without tearing in high pressure applications.

Operating Specifications

- Flow Range:
  - 25mm (1"): 19 – 95 lpm (5 – 25 gpm)
  - 40mm (1.5"): 75 – 227 lpm (20 – 60 gpm)
  - 50mm (2"): 151 – 303 lpm (40 – 80 gpm)
- Operating Pressure (15,2 bar (220 psi) maximum pressure rating):
  - Electric — 0,7–15 Bar (10–220 psi)
- Pressure regulating:
  - Outlet: 0,3 - 6,9 bar (5 - 100 psi ± 3 psi)
  - Inlet: 0,7 - 15,2 bar (10 - 220 psi)
- Minimum pressure differential (between inlet and outlet) for pressure regulation: 0,7 Bar (10 psi)
- Burst pressure safety rating: 52 Bar (750 psi)
- Body style:
  - Globe valve – 25mm, 40mm, and 50mm (1", 1.5", 2") female threads
- Spike Guard™ Solenoid: 24 VAC (50/60 Hz) Standard
  - Inrush: 60 Hz; 0,12 amps
  - Holding: 60 Hz; 0,10 amps

Additional features

- Diaphragm stem guide
- Ingot brass and stainless steel construction
- Pressure regulates in electric and manual modes, serviceable under pressure
- Forward-flow design for more precise regulation
- Standard, built-in Schrader-type valve for downstream pressure verification
- Anti-vandal dust cap on pressure-regulating models
- No external tubing
- External manual bleed for system flushing
- Manual flow control: adjustable to zero flow
- Stainless steel diaphragm support ring for minimum wear
- Stainless steel solenoid seat for longer life and positive shutoff
- Low-power requirement for longer wire runs

Dimensions

- 25mm (1"): 146 x 127mm (5.75" H x 5" W)
- 40mm (1.5"): 165 x 152mm (6.5" H x 6" W)
- 50mm (2"): 191 x 178mm (7.5" H x 7" W)

Warranty

- Five years

220G Series Friction Loss Data (Metric—LPM)

Model - Electric	19	38	57	76	114	151	189	227	265	303	378	454	568	644	681	757	946	1136	1325
25mm (1")	0,14	0,17	0,10	0,17	0,38	0,61													
40mm (1.5")				0,27	0,29	0,32	0,34	0,36	0,38	0,50									
50mm (2")					0,07	0,14	0,14	0,17	0,21	0,24	0,41	0,52	0,69	0,83	0,97				

Notes: *For optimum performance when designing a system, calculate total friction loss to ensure sufficient downstream pressure.*
For optimum regulation performance, size regulating valves toward the higher flow ranges. Flow rates are recommended not to exceed 0,34 Bar (5 psi) loss.

220 Series Friction Loss Data (English—GPM)

Model - Electric	5	10	15	20	30	40	50	60	70	80	100	120	150	170	180	200	250	300	350
1" (25mm)	2.0	2.5	1.5	2.5	5.5	8.9													
1.5" (40mm)				3.9	4.2	4.6	4.9	5.2	5.5	7.2									
2" (50mm)					1.0	2.0	2.0	2.5	3.0	3.5	6.0	7.5	10.0	12.0	14.0				

Notes: *For optimum performance when designing a system, calculate total friction loss to ensure sufficient downstream pressure.*
For optimum regulation performance, size regulating valves toward the higher flow ranges. Flow rates are recommended not to exceed 0.34 Bar (5 psi) loss.

Specifying Information—220G Series

220G-XX-X-X			
Type	*Body Style*	*Solenoid*	*Size*
220G	XX	X	X
220G— 220G Series Brass Valve	24—BSP, Electric, Pressure Regulated 27—NPT, Electric, Pressure Regulated	0—60 Hz Solenoid 5—50 Hz Solenoid 6—Less Solenoid	4—25mm (1") 6—40mm (1.5") 8—50mm (2")
Example: A 25mm (1") 220G Series brass electric valve with a 50 Hz solenoid BSP threads, would be specified as: 220G–24–54			

P220G SERIES VALVES

Learn more at **Toro.com**

Features & Benefits | Specifications

The P220G Series provide a full family of plastic valves that can deliver the water to meet the challenging needs of today's courses. With precise pressure regulation these valves deliver the optimum pressure and flow requirements to every sprinkler on the zone ensuring maximum uniformity of the water to the turf.

Features & Benefits

1. **EZReg® Pressure Regulating System**
Can be adjusted from 0,3-6,9 Bar (5-100 PSI) to deliver the optimum pressure for every need.

2. **Spike Guard™ Solenoid**
With its 20,000 volt lightning rating, it virtually eliminates the need for solenoid replacements in high lightning environments.

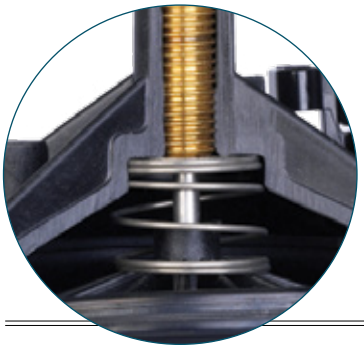
3. **Internal Manual Bleed**
Ensures the optimum pressure of the system even when being operated manually.

4. **Double-beaded Fabric Reinforced Diaphragm**
Provides superior performance and extended life without tearing in high-pressure golf applications.

P220G-27-08
50mm
(2")

P220G-27-06
40mm
(1.5")

P220G-27-04
25mm
(1")



Self Cleaning Metering Pin
A self-cleaning feature that operates two times during every valve cycle ensuring smooth positive opening and closing.

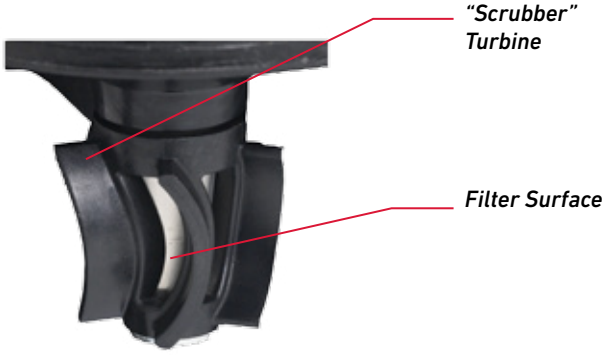
P220G SERIES VALVES

Valve Wire Sizing Chart

*Maximum One-way Distance (in ft.) Between Controller and Valve Using Spike-Guard™ Solenoid**

Ground Wire	Control Wire						
	18	16	14	12	10	8	6
18	2040	2520	2940	3280	3540	3720	3860
16	2520	3260	4000	4660	5220	5620	5920
14	2940	4000	5180	6360	7420	8300	8960
12	3280	4660	6360	8240	10100	11800	13180
10	3540	5220	7420	10100	13180	16060	18770
8	3720	5260	8300	11800	16060	20800	25540
6	3860	5960	8960	13180	18700	25540	33080

* Solenoid Model: 24 V ac
Pressure: 10,3 Bar (150 psi)
Voltage Drop: 4 V
Minimum Operating Voltage: 20 V
Amperage (peak) 0.12 A



ACT™ System

Patent-pending Active Cleansing Technology – in which the turbine is constantly rotating to clean the metering/filtration area. This ensures that dirt, algae, chlorines, chloramines and water treated with ozone will not impede valve performance (P220GS only).

Operating Specifications

- Flow Range:
  - 25mm (1"): 18,9 - 132,5 LPM (5 - 35 GPM
  - 40mm (1.5"): 113,6 - 416,4 LPM (30 - 110 GPM
  - 50mm (2"): 302,8 - 681,4 LPM (80 - 180 GPM)
- Operating Pressure: (15,2 bar (220 psi) maximum pressure rating)
  - Electric: 0,7 - 15,2 bar (10 - 220 psi)
- Pressure regulating:
  - Outlet: 0,3 - 6,9 bar (5 - 100 psi ± 3 psi)
  - Inlet: 0,7 - 15,2 bar (10 - 220 psi)
- Minimum pressure differential (between inlet and outlet) for pressure regulation: 0,7 bar (10 psi)
- Burst pressure safety rating: 51,7 bar (750 psi)
- Body styles:
  - Globe/Angle: 25mm, 40mm, and 50mm (1", 1.5", 2") female threads
- Spike Guard™ Solenoid: 24 VAC (50/60 Hz) Standard
  - Inrush: 60 Hz; 0,12 amps
  - Holding: 60 Hz; 0,1 amps

Additional features

- Glass-filled nylon and stainless steel construction
- Internal and External bleed
- No external tubing
- Standard, built-in Schrader-type valve for downstream
- pressure verification
- Flow control independent of solenoid
- Self-aligning bonnet to ensure correct installation
- Self-cleaning, stainless steel metering rod
- Low-flow capability down to 5 GPM
- Low-power requirement for longer wire runs

Dimensions

- 25mm (1"): 146 x 127mm (5.75" H x 5" W)
- 40mm (1.5"): 165 x 152mm (6.5" H x 6" W)
- 50mm (2"): 191 x 178mm (7.25" H x 7" W)

Warranty

- Five years

P220G Series Friction Loss Data—(Metric)

Model	Type	LPM Flow																			
		25	50	75	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
25mm (1")	Electric	0,15	0,13	0,17	0,31	0,41	0,48														
40mm (1.5")	Electric			0,32	0,33	0,36	0,37	0,42	0,47	0,55	0,64	0,79	1,02								
50mm (2")	Electric					0,09	0,14	0,15	0,19	0,24	0,35	0,44	0,51	0,59	0,75	1,00					

Notes: For optimum performance when designing a system, calculate total friction loss to ensure sufficient downstream pressure.
For optimum regulation performance, size regulating valves toward the higher flow ranges.
Flow rates are recommended not to exceed 0,3 bar loss. Values shown in bar.

P220G Series Friction Loss Data*—(U.S.)

Size	Configuration	GPM Flow																				
		5	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	180	200	225	250	275	300
25mm (1")	Globe	4.00	4.20	3.20	4.10	7.20																	
	Angle	4.00	4.20	3.10	2.70	4.80																	
40mm (1.5")	Globe				1.60	2.30	3.60	5.20	7.00	9.20	11.20	13.60	16.40										
	Angle				1.30	1.60	2.80	4.00	5.50	7.10	8.90	10.90	13.80										
50mm (2")	Globe									2.10	2.70	3.30	4.00	4.80	5.60	6.50	7.50	8.70					
	Angle									1.20	1.60	2.00	2.40	2.80	3.30	3.90	4.40	5.20					

***Note:** For optimum performance when designing a system, be sure to calculate total friction loss to ensure sufficient downstream pressure.*
For optimum regulation performance, size regulating valves toward the higher flow ranges.
Flow rates are recommended not to exceed 5 psi loss. Values shown in psi.

Specifying Information—P220G Series

P220G-27-0XXXX

Type	*Body Style*	*Size*	*Optional*
P220G	**27**	**X**	**XXX**
P220G—P220G Series Plastic Valve	27—NPT, Pressure-regulated 0,3-6,9 bar (5-100 PSI) 24—BSP, Pressure Regulated 0,3-6,9 bar (5-100 PSI)	4—25mm (1") 6—40mm (1.5") 8—50mm (2")	DL—DC Latching Solenoid

Example: A 25mm (1") P220G Series plastic electric, pressure-regulating valve with a 60 Hz solenoid, would be specified as: P220G-27-04

TORO® VALVE BOXES

Features & Benefits | Specifications

Valve Boxes are used for practical, aesthetic and security reasons wherever valves or off-fairway GDC modules need to be installed below grade but remain accessible for monitoring or service. Toro offers a full line of valve boxes that will fit valves up to 10,2cm (4") and 1-, 2- and 4- station GDC modules.

Features & Benefits

1 **T-lip Lid Design**
The T-lip lid design keeps dirt out to prevent jamming and provides improved grip for lid removal and easy access to the equipment inside. The secure snap fit and bolt retention ensure that only authorized personnel will have access.

2 **Wide Range Of Sizes**
Toro offers a wide range of round and rectangular boxes to meet every need. 15,2,17,8 and 25,4cm (6", 7" and 10") round; and 30,5 x 43,2cm and 38,1 x 53,3cm (12" x 17" and 15" x 21") rectangular in both 12" standard depth and 15,2cm (6") shallow depth. With the reverse stack capability and rectangular 15,2cm (6") extensions tackling deeper installations can be easily accomplished.

3 **Variety of Colors**
Toro valve boxes and covers come in a wide variety of colors to blend into the surrounding environment or to identify specific applications. Green for grass, tan for sand and purple for non-potable water applications. Black and brown to blend in with a variety of soils and mulches and gray for electrical applications.

4 **Durable Construction**
Valve boxes are constructed of H.D.P.E. (High-Density Polyethylene) with heavy-duty wall sections designed to provide a secure enclosure to protect your equipment investment.

Rectangular Extension Boxes
Rectangular extensions allow for deeper installation in 15,2cm (6") increments

Reverse Stack
Allows for deeper installations in an initial 30,5cm (12") then 70cm (24") increments.

Ordering Information—Round Valve Boxes

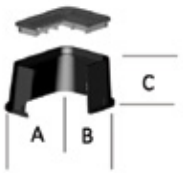
TVB-XXRND-XX		
Type	**Size**	**Color Description**
TVB	**XXRND**	**XX**
TVB—Toro Valve Box	6—15,2cm (6") Round 7—17,8cm (7") Round 10—25,4cm (10") Round	Blank— Green lid and black box G—Green lid and box GY—Gray lid and box (electrical) T—Tan lid and box E—Purple lid and box (effluent) BK—Black lid and box BR—Brown lid w/black box
Example - A Toro 17,8cm (7") round valve box for effluent water applications would be specified as: TVB-7RND-E		

Description	A Length	B Width	C Height	Weight (lbs)
15,2cm(6")	16,0cm(6.3")	20,6cm(8.1")	22,9cm(9.0")	0,52 kg (1.15 lbs)
17,8cm(7")	17,3cm(6.8"	23,6cm(9.3")	22,9cm(9.0")	0,82 kg (1.80 lbs)
25,4cm(10")	25,1cm(9.9")	33,0cm(13.0")	26,2cm(10.3")	1,54 kg (3.39 lbs)

Ordering Information—Rectangular Valve Boxes

TVB-XXXX-XX-XX			
Type	**Size**	**Height**	**Color Description**
TVB	**XXXX**	**XX**	**XX**
TVB—Toro Valve Box	1217—30,5X43,2cm (12"X17") 1521—38,1X53,3cm (15"X21")	6—15,2cm(6") High 12—30,5cm(12") High	Blank— Green lid and black box G—Green lid and box GY—Gray lid and box (elect.) T—Tan lid and box E—Purple lid and box (effluent) BK—Black lid and box BR—Brown lid w/black box
Example - A Toro 30,5x43,2x15,2(12x17x6) rectangular valve box for effluent water applications would be specified as: TVB-1217-6-E			

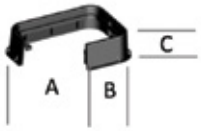
Discription	A Length	B Width	C Height	Weight (lbs)
30,5x43,2x15,2 (12x17x6)	47,8cm (18.8")	35,0cm (13.8")	17,3cm (6.8")	2,98 kg (6.56 lbs)
30,5x43,2x30,5 (12x17x12)	53,3cm (21.0")	40,6cm (16.0")	31,2cm (12.3")	4,11 kg (9.05 lbs)
38,1x53,3x15,2 (15x21x6)	61,7cm (24.3")	47,8cm (18.8")	18,3cm (7.2")	3,97 kg (8.75 lbs)
38,1x53,3x30,5 (15x21x12)	65,3cm (25.7")	48,5cm 19.1"	31,2cm (12.3")	5,49 kg (12.11 lbs)



Ordering Information—Rectangular Extensions

TVB-XXXX-EXT6BOX-XX			
Type	**Size**	**Height**	**Color Description**
TVB	**XXXX**	**EXT6BOX**	**XX**
TVB—Toro Valve Box	1217—30,5X43,2cm (12"X17") 1521—38,1X53,3cm (15"X21")	EXT6BOX—15,2cm(6") High	Blank— Black box G—Green box GY—Gray box (elect.) T—Tan box E—Purple box (effluent)
Example - A Toro 15,2cm (6") extension for a 30,5x43,2cm (12"x17") tan valve box would be specified as: TVB-1217-EXT6BOX-T			

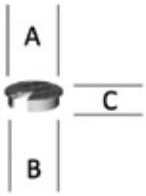
Discription	A Length	B Width	C Height	Weight (lbs)
30,5x43,2x15,2 (12x17x6)	47,8cm (18.8")	35,0cm (13.8")	17,3cm (6.8")	3,04 kg (6.71 lbs)
38,1x53,3x15,2 (15x21x6)	61,7cm (24.3")	45,2cm (17.8")	17,5cm (6.9")	4,03 kg (8.89 lbs)



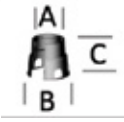
Ordering Information—Round Valve Box Separates

TVB-XXXXX-XX		
Type	**Size Box or Lid**	**Color Description**
TVB	**XXXXX**	**XX**
TVB—Toro Valve Box	6LID—15,2cm(6") Round lid 7LID—17,8cm(7") Round lid 10LID—25,4cm(10") Round lid BOX6—15,2cm(6") Box (black only) BOX7—17,8cm(7") Box (black only) BOX10—25,4cm(10") Box (black only)	G—Green lid GY—Gray lid (electrical) T—Tan lid E—Purple lid (effluent) BK—Black lid BR—Brown lid
Example - A Toro 17,8cm(7") round valve box lid for effluent water applications would be specified as: TVB-7LID-E		

Description	A Length	B Width	C Height	Weight (lbs)
15,2cm (6") lid	16,0cm (6.3")	20,6cm (8.1")	3,0cm (1.2")	0,14 kg (.31 lbs)
17,8cm (7") lid	17,3cm (6.8")	23,6cm (9.3")	4,3cm (1.7")	0,24kg (.52 lbs)
25,4cm (10") lid	25,1cm (9.9")	33,0cm (13.0")	5,3cm (2.1")	0,51 (1.13 lbs)



Description	A Length	B Width	C Height	Weight (lbs)
15,2cm (6") box	16,0cm (6.3")	20,6cm (8.1")	22,9cm (9.0")	0,35 kg (.77 lbs)
17,8cm (7") box	17,3cm (6.8")	23,6cm (9.3")	22,9cm (9.0")	0,54 kg (1.19 lbs)
25,4cm (10") box	25,1cm (9.9")	33,0cm (13.0")	26,2cm (10.3")	1,02 kg (2.26 lbs)

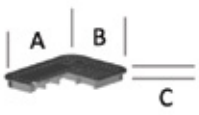


Ordering Information—Rectangular Valve Box Separates

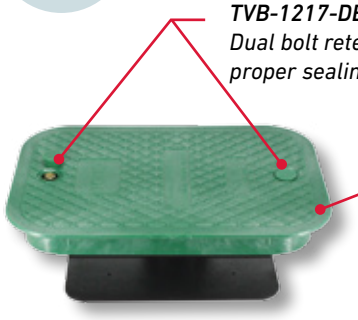
TVB-XXXX-LID-XX			
Type	**Size**	**Height**	**Color Description**
TVB	**XXXX**	**LID**	**XX**
TVB—Toro Valve Box	1217—30,5X43,2cm (12"X17") 1521—38,1X53,3cm (15"X21")	LID—Lid	Blank— Green lid G—Green lid GY—Gray lid (elect.) T—Tan lid E—Purple lid (effluent) BK—Black lid BR—Brown lid
Example - A Toro 30,5x43,2cm (12x17) rectangular valve box lid for effluent water applications would be specified as: TVB-1217-LID-E			

TVB-XXXX-XXXXX		
Type	**Size**	**Height**
TVB	**XXXX**	**XX**
TVB—Toro Valve Box	1217—30,5X43,2cm (12"X17") 1521—38,1X53,3cm (15"X21")	6BOX—15,2cm(6") High valve box 12BOX—30,5cm(12") High valve box
Example - A Toro 30,5x43,2x15,2(12x17x6) rectangular valve box would be specified as: TVB-1217-6BOX-BK		

Discription	A Length	B Width	C Height	Weight (lbs)
30,5x43,2cm (12"x17") lid	42,9cm (16.9")	30,0cm (11.8")	5,1cm (2.0")	1,24 kg (2.73 lbs)
38,1x53,3cm (15"x21") lid	54,1cm (21.3")	37,8cm (14.9")	4,8cm (1.9")	1,47 kg (3.23 lbs)
30,5x43,2x15,2cm (12"x17"x6") box	47,8cm (18.8")	35,1cm (13.8")	17,3cm (6.8")	1,74 kg (3.83 lbs)
30,5x43,2x30,5cm (12"x17"x12") box	53,3cm (21")	40,6cm (16")	31,2cm (12.3")	2,87 kg (6.32 lbs)
38,1x53,3x15,2cm (15"x21"x6") box	61,7cm (24.3")	45,2cm (17.8")	17,5cm (6.9")	2,57 kg (5.66 lbs)
38,1x53,3x30,5cm (15"x21"x12") box	65,3cm (25.7")	48,5cm (19.1")	31,2cm (12.3")	4,02 kg (8.88 lbs)



TORO® DRY BOXES



TVB-1217-DB (Dry Box)
Dual bolt retention (with covers) to ensure proper sealing and vandal resistance.

Heavy duty lid construction molded from High Density Polyethylene (H.D.P.E), available in Green, Tan, Purple, Black, Gray and Brown.

TVB-1217-DBAP
Optional accessory plate attaches directly to the lid and allows attachments of various components like GDC modules, elec/hyd converters, battery operated controllers and more.

Dual seal lid design keeps water and critters from creeping in from the top.

Heavy duty 30,5x43,2x30,5cm (12"x 17" x 12") box construction molded from High Density Polyethylene (H.D.P.E), available in Green, Tan, Purple, Black, Gray and Brown.

TVB-1217-DBDS
Optional dirt skirt attaches directly to the bottom of the valve box and provides an outer seal to prevent intrusion from burrowing rodents, water and critters.

Specifications

Static Vertical Load Rating:
SCTE - Light Duty, Pedestrian

Properties of Base Material	ASTM Test Method	HDPE
Tensile Strength	D-638	186,16 - 303,37 bar (2700-4,400 PSI) (Typical Range)
Flexural Modulus	D-790	Minimum 14,000 not to exceed 24,000 PSI
Notched Izod Impact Strength	D-256	0.5 - 3.0 (Typical Range)
Deflection Temperature @ 66PSI	D-648	65,56 - 93,33 C (150-200 F) (Typical Range)
Density	D-792	Minimum 0.95- not to exceed 0.965
Electrical Dielectric Strength	D-149	400-600 V/mil (Typical Range)
Chemical Resistance	D-543	Very Resistant
Water Absorption	D-570	Less than 1% weight change

Warranty

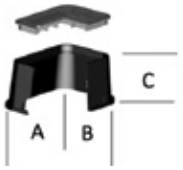
- One year

Ordering Information—Dry Box Valve Boxes

TVB-1217-12DB-XX			
Type	*Size*	*Height*	*Color Description*
TVB	**1217**	**12DB**	XX
TVB—Toro Valve Box	1217—30,5X43,2 12"X17"	12DB—30,5 (12") High Dry Box	Blank— Green lid and black box G—Green lid and box GY—Gray lid and box (elect.) T—Tan lid and box E—Purple lid and box (effluent) BK—Black lid and box BR—Brown lid w/black box
Example - A Toro 30,5x43,2x30,5cm (12"x17"x12") valve box for electrical applications would be specified as: TVB-1217-12DB-GY			

Accessories	
TVB-1217-DBAP	DRY BOX Accessory Plate
TVB-1217-DBDS	DRY BOX Dirt Skirt

Discription	A Length	B Width	C Height	Weight (lbs)
12DB	53,3cm (21.0")	40,6cm (16.0")	31,2cm (12.3")	4,45 kg (9.8 lbs)



Discription	A Length	B Width	C Height	Weight (lbs)
DBAP	29,2cm (11.5")	21,6cm (8.5")	0,5cm (.2")	0,45 kg (0.99 lbs)
DBDS	50,3cm (19.8")	36,8cm (14.5")	3,3cm (1.3")	1,27 kg (2.8 lbs)

470 QUICK COUPLER VALVES

Features

- Full range of flows from 0 to 100 gallons per minute
- 1,9, 2,5 and 3,8cm (0.75", 1" and 1.5") one- and two-piece single-lug models including ACME thread key connections to meet a variety of installation requirements
- Hose swivel provides 360° movement without hose tangling for ease of use
- A variety of sizes meet various applications
- Metal and vinyl locking and non-locking covers

Warranty

- Two years

Ordering Information—Quick Coupler Valve Accessories

Order Number	Description
463-01	12,7mm(0.5") Female, 19,1mm(0.75") Male, Single-lug Coupler Key
464-01	19,1mm(0.75") Female, 25,4mm(1") Male, Single-lug Coupler Key
464-02	25,4mm(1") Female, Single-lug Coupler Key
464-03	25,4mm(1") ACME Thread Coupler Key
465-01	31,8mm(1.25") Inlet, 19,1mm(0.75") Female, 25,4mm(1") Male, Single-lug Coupler Key
465-02	25,4mm(1") Female, 38,1mm(1.5") Male, Single-lug Coupler Key
466-01	31,8mm(1.25") Female, 38,1mm(1.5") Male, Single-lug Coupler Key
477-00	19,1mm(0.75") NPT x 19,1mm(0.75") MHT Hose Swivel
477-01	25,4mm(1") NPT x 19,1mm(0.75") MHT Hose Swivel
477-02	25,4mm(1") NPT x 25,4mm(1") MHT Hose Swivel
491-02	Key for Locking Cover

470 Series Friction Loss Data—(Metric)

	LPM Flow										
	35	50	75	100	125	150	175	225	275	325	375
Model 473	1,0	0,2	0,4	0,6							
Model 474			0,1	0,2	0,3	0,5					
Model 475				0,1	0,2	0,2	0,4	0,6			
Model 476						0,1	0,1	0,2	0,3	0,4	0,6

Note: For optimum sprinkler performance when designing a system, be sure to calculate total friction loss to ensure sufficient downstream pressure. Flow rates are recommended not to exceed 0,3 bar loss. Values listed in bar.
For kPa values, multiply tabular values by 100. For Kg/cm2 values, multiply tabular values by 1,02.

470 Series Friction Loss Data—(U.S.)

	GPM Flow											
	10	15	20	25	30	35	40	50	60	70	85	100
Model 473	1.5	3.1	5.3	8.5								
Model 474			1.1	2.2	3.6	5.7	8.0					
Model 475				1.0	1.8	2.7	3.6	6.4	9.8			
Model 476							1.0	1.7	2.6	3.6	5.6	8.8

Note: For optimum sprinkler performance when designing a system, be sure to calculate total friction loss to ensure sufficient downstream pressure. Flow rates are recommended not to exceed 5 psi loss. Values listed in psi.

Specifying Information—Quick Couplers

Toro Model Number	Description	Inlet Size NPT Threads	Body Type	Outlet Key Size	Corresponding Key(s)	Valve Cover Type	Corresponding Swivel(s)*		
							477-00	477-01	477-02
473-00	QCV 19,1(0.75), SS CVR	19,1mm(.75")	1 Piece	19,1mm(.75")	463-01	Stainless Steel	A	B	B
474-00	QCV 25,4(1), SS CVR	25,4mm(1")	1 Piece	25,4mm(1")	464-01 & 464-02	Stainless Steel	B	A	A
474-01	QCV 25,4(1), VYL CVR	25,4mm(1")	1 Piece	25,4mm(1")	464-01 & 464-02	Yellow Vinyl, Spring Loaded	B	A	A
474-03	QCV 25,4(1), VYL CVR, W/LK	25,4mm(1")	1 Piece	25,4mm(1")	464-01 & 464-02	Yellow Vinyl, Locking, Spring Loaded	B	A	A
474-04	QCV 25,4(1), LAV VYL CVR	25,4mm(1")	1 Piece	25,4mm(1")	464-01 & 464-02	Lavender Vinyl, Locking, Spring Loaded	B	A	A
474-21	QCV 25,4(1), VYL CVR, 2PC	25,4mm(1")	2 Piece	25,4mm(1")	464-01 & 464-02	Yellow Vinyl, Spring Loaded	B	A	A
474-24	QCV 25,4(1), LAV VYL CVR, 2PC	25,4mm(1")	2 Piece	25,4mm(1")	464-01 & 464-02	Lavender Vinyl, Locking, Spring Loaded	B	A	A
474-40	QCV 25,4(1), SS CVR, ACME	25,4mm(1")	1 Piece	25,4mm(1")	464-03	Stainless Steel	B	A	A
474-41	QCV 25,4(1), VYL CVR, ACME	25,4mm(1")	1 Piece	25,4mm(1")	464-03	Yellow Vinyl, Spring Loaded	B	A	A
474-44	QCV 25,4(1), LAV VYL CVR, W/LK, ACME	25,4mm(1")	1 Piece	25,4mm(1")	464-03	Lavender Vinyl, Locking, Spring Loaded	B	A	A
475-00	QCV 31,8(1.25), SS CVR	25,4mm(1")	1 Piece	31,8mm(1.25")	465-01 & 465-02	Stainless Steel	B	B	B
475-01	QCV 31,8(1.25), VYL CVR	25,4mm(1")	1 Piece	31,8mm(1.25")	465-01 & 465-02	Yellow Vinyl	B	B	B
476-00	QCV 38,1(1.5), SS CVR	38,1mm(1.5")	1 Piece	38,1mm(1.5")	466-01	Stainless Steel	B	B	B
476-01	QCV 38,1(1.5), VYL CVR	38,1mm(1.5")	1 Piece	38,1mm(1.5")	466-01	Yellow Vinyl, Spring Loaded	B	B	B
476-04	QCV 38,1(1.5), LAV VYL CVR	38,1mm(1.5")	1 Piece	38,1mm(1.5")	466-01	Lavender Vinyl, Locking, Spring Loaded	B	B	B

* A – Attaches directly to the quick coupler key. B – Requires additional fittings to be used with the quick coupler key.

VALVE SPECIFICATIONS

CONTROL SYSTEMS

Type of System	*Maximum Distance From Controller to Valve*	*Elevation Restrictions*
Pin Type£ (00) Hydraulic* with 4,8mm (0.19") Control Tubing	30,5m (100')	
Pin Type£ (00) Hydraulic* with 6,4mm(0.25") Control Tubing	61,0m (200')	
Normally Open (01) with 4,8mm(0.19") Control Tubing	152,4m (500')	Valve elevation should not exceed 7.6m (25') ABOVE or 21.3 (70') BELOW controller elevation.
Normally Closed (08) Hydraulic with 4,8mm(0.19") Control Tubing	152,4m (500')	Valve elevation should not exceed 0m (0') ABOVE or 21.3 (70') BELOW controller elevation.
Normally Open (01) with 6,4mm(0.25") Control Tubing	304,8m (1000')	Valve elevation should not exceed 7.6m (25') ABOVE or 21.3 (70') BELOW controller elevation.
Normally Closed (08) Hydraulic with 6,4mm(0.25") Control Tubing	304,8m (1000')	Valve elevation should not exceed 7.6m (25') ABOVE or 21.3 (70') BELOW controller elevation.
Electric (06)	Depends on variables • Voltage available • Wire size	NONE

** - All hydraulic connections on Toro valves are ¼" insert type.*
- Control line pressure must be equal to or greater than mainline pressure.
- Control line pressure range is 40 to 150 psi.
*** Minimum solenoid voltage required for reliable electric VIH operation is 19.5 V AC*
£ - Maximum of one (1) valve per station on pin type systems.

CONVERSION INFORMATION

- All gallons per minute are shown in U.S.
- To convert to imperial gallons per minute, multiply by 0.833
- To convert to liters per minute, multiply by 3.78
- To convert pounds per square inch (psi) to atmospheres, divide by 14.7
- To convert pounds per square inch (psi) to kilograms per square centimeter (kg/cm^2), divide by 14.22
- To convert feet to meters, divide by 3.28

WINTERIZING SPECIFICATIONS

In freezing climates, valves should be properly winterized to prevent freeze-related damage.

SPRINKLER SPACING

The Toro Company does not recommend designing for zero (0) mph wind conditions.

■Square Spacing

No wind - 55% of diameter
4 mph wind - 50% of diameter
6,4 kph wind - 50% of diameter
8 mph wind - 45% of diameter
12,8 kph - 45% of diameter

■Triangular Spacing

No wind - 60% of diameter
4 mph wind - 55% of diameter
6,4 kph wind - 55% of diameter
8 mph wind - 50% of diameter
12,8 kph - 50% of diameter

■Single Row Spacing

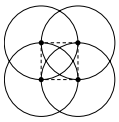
No wind - 50% of diameter
4 mph wind - 50% of diameter
6,4 kph wind - 50% of diameter
8 mph wind - 45% of diameter
12,8 kph - 45% of diameter

Design in consideration of the worst wind conditions.

PRECIPITATION RATE FORMULAS

■Square-spaced sprinklers in pattern:

$$\frac{\text{GPM of full-circle x 96.3}}{(\text{Spacing})^2}$$



■ Triangular-spaced sprinklers in pattern:

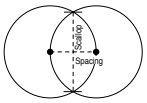
$$\frac{\text{GPM of full-circle x 96.3}}{(\text{Spacing})^2\ (0.866)}$$

■ Area and flow:

$$\frac{\text{Total GPM of zone x 96.3}}{\text{Total irrigated square feet of zone}}$$

■ Single row:

$$\frac{\text{GPM of full-circle x 96.3}}{(\text{Spacing})\ (\text{Scallop})}$$



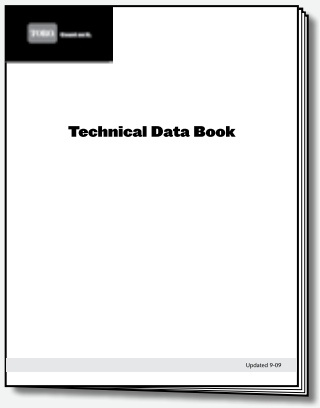
Valve-In-Head Activation Types

Electric
Pressure regulation feature at the same pressure—regardless of elevation changes
Manual On-Off-Auto control at the sprinkler
Individual sprinkler control for more precise watering

Normally Open
Individual sprinkler control for more precise watering
Hydraulic control capability with sophisticated electronic/electric control systems
Ideal for all dirty water applications—irrigation water is not used for control
Lightning resistant

Check-O-Matic
Maintains 11,3m(37') elevation change
Eliminates low-head drainage
Requires separate remote control valve

Technical Data Book



Form No. 490-1737

WIRE SIZING

Current Draw (Amperage)

Standard Wattage Solenoid

Product	Solenoids	Assumes 24 VAC, 50/60 Hz Output			
		120 VAC, 60 Hz		240 VAC, 50 Hz	
		Inrush	Holding	Inrush	Holding
Network VP Satellite/Network and VPE Satellite	0	–	0,20	–	0,19
	1	0,26	0,25	0,30	0,22
	2	0,35	0,30	0,34	0,25
	3	0,40	0,34	0,36	0,28
	4	0,46	0,39	0,39	0,30
	5	0,50	0,43	0,42	0,33
	6	0,64	0,48	0,44	0,36
	7	0,70	0,52	0,46	0,38
	8	0,73	0,56	0,50	0,41
	9	0,77	0,61	0,53	0,43
	10	0,80	0,65	0,57	0,46
	11	0,85	0,69	0,57	0,48
	12	0,91	0,73	0,57	0,51
	13	1,00	0,77	0,61	0,53
	14	1,03	0,81	0,62	0,55
	15	1,05	0,85	0,63	0,58
	16	1,14	0,88	0,66	0,60
Network LTC Satellite	0	0,15	0,15	0,14	0,14
	1	0,23	0,21	0,18	0,17
	2	0,31	0,27	0,21	0,20
	3	0,39	0,33	0,24	0,23
	4	0,47	0,39	0,26	0,25
	5	0,55	0,45	0,29	0,28
	6	0,63	0,51	0,32	0,30
	7	0,71	0,57	0,34	0,33
	8	0,79	0,63	0,37	0,35
	9	0,87	0,69	0,40	0,38
	10	0,95	0,75	0,42	0,40
	11	1,03	0,81	0,45	0,43
	12	1,11	0,87	0,48	0,46
E-Series OSMAC Satellite	0	0,05	0,05	0,03	0,03
	1	0,13	0,11	0,07	0,06
	2	0,21	0,17	0,12	0,09
	3	0,29	0,23	0,17	0,12
	4	0,37	0,29	0,21	0,15
	5	0,45	0,35	0,26	0,19
	6	0,53	0,41	0,31	0,22
	7	0,61	0,47	0,35	0,25
	8	0,69	0,53	0,40	0,28
	9	0,77	0,59	0,45	0,31
	10	0,85	0,65	0,50	0,35
	11	0,93	0,71	0,54	0,38
	12	1,01	0,77	0,59	0,41
	13	1,09	0,83	0,64	0,44
	14	1,17	0,89	0,68	0,47
	15	1,25	0,95	0,73	0,51
	16	1,33	1,01	0,81	0,54

Spike Guard™ Low Wattage Solenoid

Product	Solenoids	Assumes 24 VAC, 50/60 Hz Output			
		120 VAC, 60 Hz		240 VAC, 50 Hz	
		Inrush	Holding	Inrush	Holding
Network VP Satellite/Network and VPE Satellite	0	–	0,20	0,21	0,20
	1	0,24	0,22	0,22	0,21
	2	0,26	0,24	0,23	0,22
	3	0,29	0,27	0,24	0,23
	4	0,31	0,29	0,25	0,24
	5	0,33	0,31	0,26	0,26
	6	0,35	0,33	0,28	0,27
	7	0,39	0,37	0,29	0,28
	8	0,41	0,39	0,30	0,30
	9	0,43	0,41	0,32	0,31
	10	0,46	0,44	0,34	0,33
	11	0,47	0,46	0,35	0,35
	12	0,49	0,48	0,36	0,36
	13	0,52	0,50	0,37	0,38
	14	0,54	0,52	0,38	0,39
	15	0,56	0,54	0,40	0,40
	16	0,58	0,56	0,43	0,42
	17	0,60	0,58	0,44	0,43
	18	0,61	0,60	0,46	0,45
	19	0,63	0,62	0,47	0,46
	20	0,66	0,64	0,49	0,48
	21	0,68	0,66	0,50	0,49
	22	0,70	0,68	0,51	0,50
	23	0,74	0,70	0,53	0,52
	24	0,76	0,72	0,54	0,53
	25	0,79	0,74	0,55	0,54
	26	0,80	0,75	0,57	0,56
	27	0,85	0,77	0,58	0,57
	28	0,90	0,79	0,59	0,58
	29	0,93	0,81	0,60	0,59
	30	0,96	0,82	0,61	0,60
	31	1,01	0,84	0,62	0,61
	32	1,04	0,86	0,64	0,62
Network LTC Satellite and Network LTC Plus Satellite	0	0,15	0,15	0,14	0,14
	1	0,17	0,17	0,16	0,15
	2	0,20	0,19	0,18	0,17
	3	0,22	0,21	0,20	0,19
	4	0,25	0,23	0,21	0,20
	5	0,27	0,25	0,23	0,22
	6	0,29	0,27	0,25	0,24
	7	0,32	0,29	0,27	0,25
	8	0,34	0,31	0,28	0,27
	9	0,37	0,33	0,30	0,29
	10	0,39	0,35	0,32	0,30
	11	0,41	0,37	0,33	0,31
	12	0,44	0,39	0,34	0,33
E-OSMAC Satellite	0	0,05	0,05	0,03	0,03
	1	0,07	0,07	0,05	0,05
	2	0,10	0,09	0,06	0,06
	3	0,12	0,11	0,08	0,08
	4	0,15	0,13	0,10	0,09
	5	0,17	0,15	0,12	0,11
	6	0,19	0,17	0,13	0,12
	7	0,22	0,19	0,15	0,14
	8	0,24	0,21	0,17	0,15
	9	0,27	0,23	0,18	0,17
	10	0,29	0,25	0,20	0,18
	11	0,31	0,27	0,22	0,20
	12	0,34	0,29	0,23	0,21
	13	0,36	0,31	0,25	0,23
	14	0,39	0,33	0,27	0,24
	15	0,41	0,35	0,29	0,26
	16	0,44	0,37	0,30	0,27

THE TORO LIMITED WARRANTY

for Golf Irrigation Equipment

The Toro Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly warrants to the owner, each new piece of irrigation equipment (featured in the current catalog at date of installation) against defects in material and workmanship for a period described below, provided they are used for irrigation purposes under manufacturer's recommended specifications.

During the warranty period, we will repair or replace, at our option, any part found to be defective. Your remedy is limited solely to the replacement or repair of defective parts.

This warranty does not apply (i) to Acts of God (e.g., lightning, flooding, etc.); or (ii) to products not manufactured by Toro when used in conjunction with Toro products; or (iii) where equipment is used, or installation is performed in any manner contrary to Toro's specifications and instructions, nor where equipment is altered or modified.

Return the defective part to your irrigation contractor or installer, or your local Golf Irrigation Distributor,

or contact The Toro Warranty Company, P.O. Box 489, Riverside, California 92502, (800) 664-4740 for the location of your nearest Toro distributor or outside the U.S., call +1 (951) 688-9221.

Neither Toro nor Toro Warranty Company is liable for indirect, incidental or consequential damages in connection with the use of equipment, including but not limited to: vegetation loss, the cost of substitute equipment or services required during periods of malfunction or resulting non-use, property damage or personal injury resulting from installer's actions, whether negligent or otherwise.

Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

All implied warranties, including those of merchantability and fitness for use, are limited to the duration of this express warranty.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty gives you specific legal rights and you may have other rights which vary from state to state.

Golf Sprinklers

All Toro golf sprinklers are covered by this warranty for two (2) years from date the date of installation. Proof of installation date required for any warranty claim.

Valves

220G Series, P-220G Series, and 470 Series quick coupler valves are covered by this warranty for two (2) years from date of installation.

DL2000 Subsurface Drip Irrigation

Toro DL2000 Subsurface Drip Irrigation products are covered by this warranty for two (2) years from date of installation.

Control Systems and Turf Guard®

All Toro golf control systems (central controls, field satellite controllers, GDC and Turf Guard), unless covered by a Toro NSN Support Plan, are covered by this warranty for one (1) year from date of installation.

We reserve the right to improve our products and make changes in the specifications and designs without notice and without incurring obligation. Products depicted in this brochure are for demonstration purposes only. Actual products offered for sale may vary in design and features.

Toro is always there to help you care for your landscapes the way you want, when you want, better than anyone else.

TORO®

Count on it.

toro.com

Worldwide Headquarters
The Toro Company
8111 Lyndale Ave. So.
Bloomington, MN 55420 U.S.A.
Phone: (1) 952 888 8801
Fax: (1) 952 887 8258

Printed in U.S.A.

GB 200-6143NA Electronic Only

Products depicted in this literature are for demonstration purposes only. Actual products offered for sale may vary in use, design, required attachments and safety features. We reserve the right to improve our products and make changes in specifications, design and standard equipment without notice and without incurring obligation. See your dealer for details on all our warranties.

facebook.com
twitter.com/TheToroCompany
youtube.com/ToroCompanyEurope

Join the conversation
@ToroGolf